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ABSTRACT

The first section of this report introduces the U.S. Department of Labor's efforts to focus attention on the evolving demographic, economic, and social trends that are causing pervasive mismatches between workplace needs and work force capabilities. Section 2 outlines trends, changes, and challenges, including demographic and economic trends, adolescent childbearing, high school dropouts, the educationally limited, economic disenfranchisement, homelessness, and drug abuse. Section 3 deals with the mismatch between jobs and workers in the public and private sectors. Section 4 discusses where to find qualified workers. Section 5 identifies what the situation means to the Southeast for public and private employers and for the educational community. Section 6 summarizes the report. Appendix 1 provides 15 data tables. Appendix 2 provides 50 footnotes. Appendix 3 lists 46 references. Appendix 4 contains names and addresses for sources of information in the U.S. Department of Labor, U.S. Department of Education, U.S. Department of Health and Human Services, U.S. Office of Personnel Management, and state officials in Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee. (CML)

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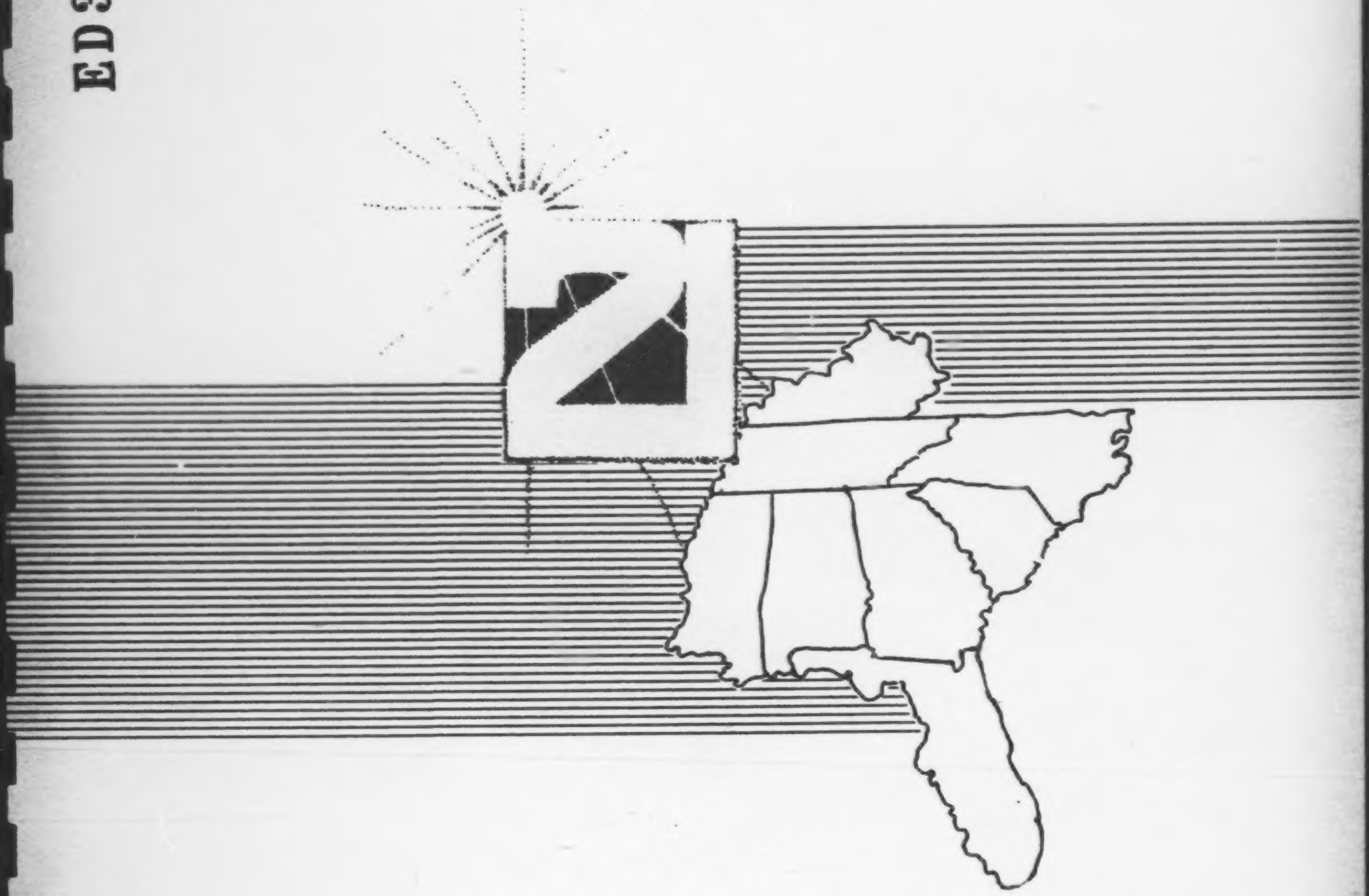

The Southeast's 21st Challenge

CE 054 651

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United States Department of Labor
United States Department of Education
United States Office of Personnel Management
United States Department of Health and Human Services

....The Need To Build A Quality Workforce

EDITORIAL COMMENT

This special report has been prepared to help build awareness of the demographic, economic, and social trends which are impacting our nation, region, state, and local economies. The analysis and data presented are the product of a broad-based, multifaceted and interdisciplinary research project. While a considerable amount of the data and information used came from the U. S. Bureau of Labor Statistics and the U. S. Bureau of the Census, the primary data source used for the regional demographic and economic projections presented was the *Regional Economic Projections Series 87-R-2, Regional Economic Growth in the United States* published by NPA Data Services, Inc. In addition, data was also obtained through extensive literature research and with the assistance of various other reliable academic and professional sources. While it is not possible to identify here all the individuals and organizations who provided input for this report, special appreciation is expressed to the following individuals and their organizations for the support and assistance they provided during this project:

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The primary focus of this report is to build awareness of how various demographic, economic, and social trends are being reflected in the region. Therefore, this report is designed to be a tool which state and local, public and private officials can use in developing a strategy for coordinated action. The figures presented should be considered as reasonably accurate estimates and indicators of economic, demographic, and social trends projected at a given time and based upon currently available data.

For further information regarding this study, please contact William A. Dealy, Jr., Regional Management Analyst and Coordinator for Research, Demonstrations, and Evaluations, U. S. Department of Labor (DOL), Employment and Training Administration (ETA), Management Data Systems and Analysis Unit (MDS&A), 1371 Peachtree Street, N.E., Room 400, Atlanta, Georgia, (404) 347-3534.

PREFACE - DEPARTMENT OF LABOR

During her confirmation hearing, Secretary of Labor Elizabeth Dole emphasized that the mission of the U. S. Department of Labor must be to coordinate a strategy of "*growth plus.*" That is, the Department's programs and activities must continue to support the economic growth our nation has realized over the recent years and at the same time provide help to those for whom the jobs of the future are now out of reach because of a skill gap, family pressures, or the lack of supportive government policies.

As Mrs. Dole put it, "We have within our reach the fulfillment of a long-awaited dream...that every American who wants a job can have a job. But, to fulfill that dream for many Americans, we must bring about timely and coherent intervention...not simply by government, but through the cooperation of private enterprise, unions, schools, and community leaders..."

Today, under Secretary Dole's leadership, the mission of the U. S. Department of Labor encompasses five major objectives: first, to ensure that American workers are the world's best trained and most highly skilled; second, to develop and implement policies that make work and family complementary rather than competing activities; third, to develop a sound and comprehensive pension policy that brings a measure of rationality to the demographic and social changes now upon us; fourth, to ensure that the American workplace is as safe and secure as we can make it; and finally, to see that relationships between management and labor move beyond the tradition of advocacy and conflict...beyond confrontation...toward productive and affirmative cooperation on behalf of interests held in common.

Each of the U. S. Department of Labor's respective Southeast Regional Offices, including the Employment and Training Administration (ETA), the Bureau of Labor Statistics (BLS), the Employment Standards Administration (ESA), the Occupational Safety and Health Administration (OSHA), the Bureau of Apprenticeship and Training (BAT), and the Women's Bureau (WB), have sought to involve themselves in, and inform their respective constituency of, the Secretary's concerns and the "*Workforce 2000*" issues. Speeches have been made, conferences held, and reports written...all to heighten the awareness of southeastern public and private sector leaders of the demographic, economic, and social trends which are impacting on the region. All of these efforts are laudable, but the message of the region's need to "*Build a Quality Workforce*" must reach even farther...to all employers, public and private, to all levels of the education community, to every citizen.

The following special report seeks not only to acquaint those who read it with the demographic, economic, and social trends occurring in the Southeast and to share some thoughts concerning...

> The changes and challenges facing the Southeast Region's economy and labor markets;
>
> The magnitude and urgency of these challenges; and
>
> The region's need to ***"BUILD A QUALITY WORKFORCE;"***
>
> But, also to encourage collaborative endeavors to ensure the development of that quality workforce.

The Southeast Regional offices of the U. S. Department of Labor are pleased to join with the Southeast Regional offices of the Department of Education, the Department of Health and Human Services, and the U. S. Office of Personnel Management in this important mission.

Daniel L. Lowry
Regional Administrator
U. S. Department of Labor
Employment and Training Administration
Region IV
Atlanta, Georgia

PREFACE - DEPARTMENT OF EDUCATION

The foundation of a quality workforce and a healthy, vigorous economy depends on the ability of our nation's school systems to provide the basic reading,writing, and mathematical skills, as well as an appreciation for the work ethic, which our young people must possess to perform effectively in the workplace of the 21st century.

The goal of public education incorporates, of course, issues much larger than economic ones. We intend, hopefully, to prepare our young children for a full and successful life as citizens in their community. Nevertheless, our economic activity as individuals and as participants in the larger community represents a significant and fundamental facet of a full and happy life.

In this respect we face an epidemic which if not reversed will alter our civil lives irrevocably. That epidemic is the continued widening of the gap between the skills needed in the workplace and the readiness of new, entry-level workers. Simply put, we are undereducating millions of young children and preparing them for lives not of success but of failure. It is therefore urgent that we listen to the voice of Labor and confront the challenges identified in this statistical analysis and report on the trends already impacting on our regional, state and local economies and labor markets.

Happily, we are beginning to listen to these voices from the workplace and, as a Federal agency, we recognize that collaboration with the U. S. Departments of Labor and Health and Human Services, as well as the U. S. Office of Personnel Management, allows the Department of Education to incorporate their valuable input and insights into a national agenda for education reform and improvement.

Jack Will
Secretary's Regional Representative
Region IV
U.S. Department of Education
Atlanta, Georgia

PREFACE - DEPARTMENT OF HEALTH AND HUMAN SERVICES

A young girl 13 years of age contemplates suicide when she discovers she is pregnant...a teen experimenting with drugs contracts AIDS from sharing needles...a baby fights for its life in a neonatal intensive care unit following its birth to a mother who was too poor to afford any prenatal care...and, a social security applicant fails to properly complete his application because he can not read and understand it. These are but a few examples of the types of issues with which the U. S. Department of Health and Human Services deals daily in carrying out its mission of providing quality health and safety to our citizens.

Yet, the impact of the issues and problems exemplified will significantly influence the quality and composition of our workforce in the year 2000 and beyond. To have a quality workforce in the 21st Century, a variety of programs and services must be available and affordable to all Americans, including minorities and the disadvantaged, so that each child born in America has the opportunity to advance and mature into responsible adults.

Our Secretary, Louis W. Sullivan, a physician and educator, is committed to an agenda that promises a better future for our children, teenagers and young adults now and for generations to come. His vigorous endorsement of the Head Start program, the lowering of infant mortality, the reduction of adolescent pregnancies, drug abuse and alcohol use, the JOBS program, and a strong bio-medical research effort, hold promise for a better educated and healthier workforce in the next century.

We are pleased to join the Departments of Labor and Education, and the U. S. Office of Personnel Management in issuing this special joint awareness report. Together we hope to address the many issues confronting our nation to insure that we generate a population capable of meeting the challenges of the future.

Thomas T. Williams, Ph. D.
Regional Director
U. S. Department of Health and
Human Services - Region IV
Atlanta, Georgia

PREFACE - U. S. OFFICE OF PERSONNEL MANAGEMENT

It is generally understood that a democracy must have a responsive, responsible civil service. It is also understood that the civil service of the United States is the best in the world. Whether it remains the best will depend on decisions we make and actions we take over the next 10 years or so.

The Federal workforce of the 21st century will be much different than the workforce of the 1980s, but it need not be less competent or less effective. A major portion of the Federal workforce of the early 21st century is already on the payroll and has proven its ability to perform. The remainder of the workforce is in the process of being educated. The ability of the American civil service to provide the kind of service this great nation requires will depend largely on our willingness to accept the challenges described in Civil Service 2000 and in documents like The Southeast's 21st Challenge.

One of these challenges will be to attract and keep not only highly educated engineers and scientists but also highly trained and motivated administrators and support personnel. The economy of the United States is rapidly becoming a service economy. As this nation's largest provider of services, the Federal Government is in direct competition with the private sector for the best and brightest workers.

The Office of Personnel Management is pleased to cooperate with the Departments of Labor, Education, and Health and Human Services in developing approaches to the problems that confront us and solving them together. We invite all Federal agencies, State and local governments, and all citizens to join us in building the Public Service of the 21st century.

John W. Ehlers
Acting Regional Director
Atlanta Region
U.S. Office of Personnel Management
Atlanta, Georgia 30303

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INTRODUCTION...

With the approach of the 21st century, governmental, academic, civic, and business leaders and organizations have begun to identify and plan for demographic, economic, and social trends which are occurring and which will impact on our nation between now and the year 2000. Over the past couple of years, the United States Department of Labor (DOL) has sought to provide leadership to this growing effort by guiding these various interests, as well as the public-at-large, in their planning for potential workforce problems brought about by demographic changes as well as social and economic problems. Through its programs and avenues of partnership with state and local governments and the private sector, DOL has attempted to heighten public awareness of the policy implications of labor force and occupational projections for human resource development and utilization. By institutionalizing processes for public discourse on these trends and their implications for human resource development and utilization and integrating the results of such public debate on planning and program design, DOL has demonstrated how partnerships between the public and private sector can foster positive efforts to address the critical issues facing our nation, region, state, and localities.

DOL's early efforts to focus attention on the evolving demographic, economic, and social trends that are already causing pervasive mismatches between workplace needs and workforce capabilities included the issuance of a research report, ***Workforce 2000: Work and Workers For The 21st Century,***[1] and a Bureau of Labor Statistics publication, ***Projections 2000.***[2] These efforts were further strengthened by joint initiatives with other Federal agencies and professional organizations,[3] and by the interest and concern voiced by others, particularly the private sector, through numerous reports and publications.[4]

While DOL's primary focus has centered on national issues, it has also sought to localize its campaign to develop a competitive workforce. In the Southeast, DOL's initiatives have included the development of a regional focus report, ***Looking To The Year 2000: A View From The Southeast***;[5] a collaborative research study conducted with the National Alliance of Business which resulted in a report entitled ***Atlanta 2000: Its Changing Job Market and The Employment Readiness of Its Workforce***;[6] and the convening of a leadership conference to make regional public and private sector leaders more aware of the potential workforce and workplace mismatches, as well as to provide a forum in which these leaders could plan strategies for state and local action.[7]

TRENDS, CHANGES, and CHALLENGES...

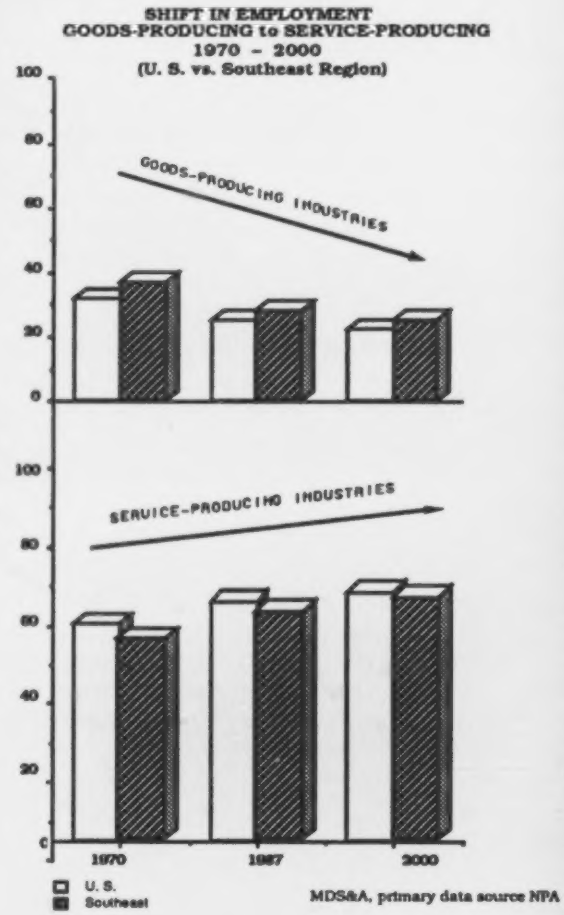
All of these efforts and each of these reports emphasized that our economy and society are beginning to undergo economic and political shock due to changes being brought about by new technology, stiff international competition, changes in consumer tastes, and demographic shifts. On both the national and regional front, these early projections and reports highlight **six major trends which are showing change in the Southeast.**[8]

Trend One... ***There will continue to be significant geographic and occupational shifts in employment as the availability of jobs diminishes in goods-producing industries and increases in service-producing industries.***[9]

The demographics are straightforward. Between 1987 and the year 2000 some 21 million new jobs will have been added to the nation's economy. Nine out of every ten of these new jobs will be in service-producing industries. By the year 2000, more than seven out of every ten of the nation's workers will be employed in the service-producing sector.

Like the nation as a whole, the availability of jobs in the Southeast will continue to decline in goods-producing industries and increase in service-producing industries. Furthermore, the migration of workers into the Southeast will continue as more than one out of every five new jobs created in the nation will be in the Southeast. As depicted in Graphic 1, in 1970, thirty-seven percent of those employed in the eight southeastern states worked in the goods-producing sector with sixty-three percent employed in the service-producing sector. By the year 2000, three out of every four workers in the Southeast will be employed in service-producing industries, while less than one in four will work in goods-producing industries.

Graphic 1

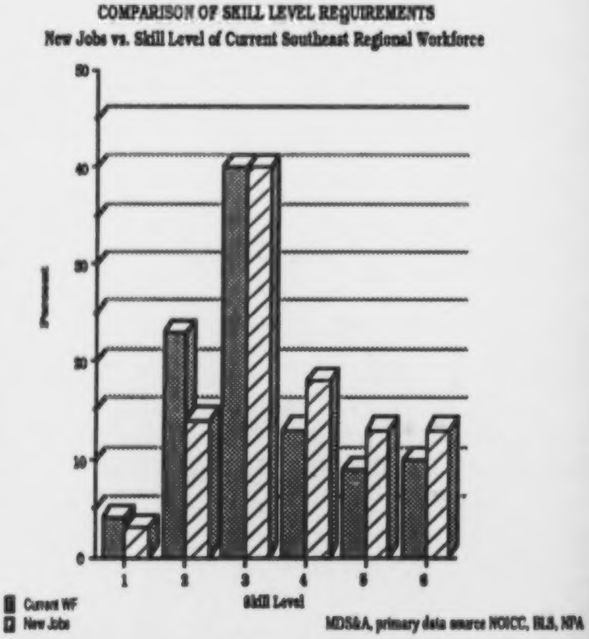

SHIFT IN EMPLOYMENT
GOODS-PRODUCING to SERVICE-PRODUCING
1970 - 2000
(U. S. vs. Southeast Region)

MDS&A, primary data source NPA

Trend Two... ***As the economy adjusts to technological change and the need to meet increased international competition many new and existing jobs will require workers to exercise higher levels of knowledge and skill.***

Over half of the new jobs created nationally, and here in the Southeast, will require some postsecondary education. The number of jobs which will require four or more years of college will increase by forty-five percent. Jobs in professional occupations requiring a college degree will increase by about a third, while technician and service jobs requiring college level education will increase nearly fifty percent. Marketing and sales occupations requiring a college degree will double. By the year 2000, the average job in the Southeast will require almost fourteen years of formal education.[10]

Graphic 2


COMPARISON OF SKILL LEVEL REQUIREMENTS
New Jobs vs. Skill Level of Current Southeast Regional Workforce

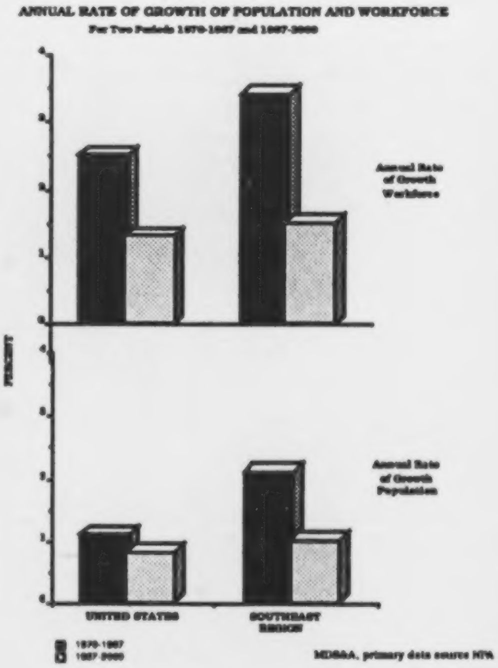
MDS&A, primary data source NOICC, BLS, NPA

In terms of skill, the jobs which are evolving and being created are requiring workers to reason, compute, and communicate at higher levels than previously expected. The General Education Development (GED) skill level definitions developed through DOL's research activities[11] can help us understand this shift in skill requirements. As Graphic 2 shows, the average new job in the Southeast will require a GED skill level of three or more. This means that workers hired for the average new job will be expected to reason through a variety of work situations without standard solutions; be able to interpret instructions involving written, oral, and diagrammatic form; perform arithmetic, algebraic, and geometric operations; and read, write, and speak on a variety of subjects of considerable complexity. Table 1, which is found in the Appendix, outlines the reasoning, mathematical, and language skills expected at each of the six DOL GED skill levels.

Trend Three... ***The population and its resulting workforce will grow more slowly and the pool of young workers entering the workforce will shrink, while the average age of the population and workforce will rise significantly.***

Between now and the year 2000 the nation's population will grow at an average annual rate of less than one percent while the workforce will expand at an average annual rate of 1.3 percent. In the Southeast both the annual rate of growth for the population and its resulting workforce will be about half that experienced during the period 1970 to 1987. However, even with this decline in growth, almost one-fourth of the nation's population increase will be in the Southeast.

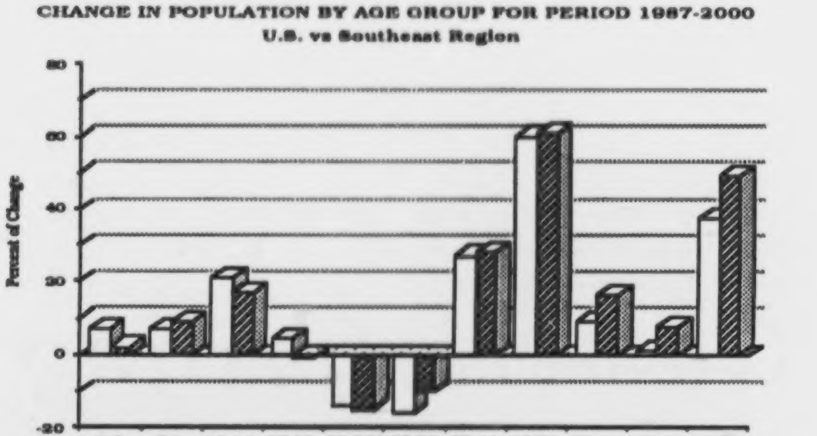
Graphic 3



MDS&A, primary data source NPA

During this same period, that portion of the population which traditionally provides entry level workers to the workforce, age group fifteen to twenty-four, will decline six percent nationally and eight percent in the Southeast. That means the number of young workers entering the region's workforce will decline by more than 550,000. Furthermore, as depicted in Graphic 4, the number of individuals of traditional college

Graphic 4



MDS&A, primary data source NPA

age, e.g., twenty to twenty-four, will decline fourteen percent nationally and fifteen percent in the Southeast. The number of white college age youth will decline at almost twice the rate for nonwhite youth. By the year 2000 almost one out of every four youth in the Southeast who are of traditional college age will be nonwhite.

By the year 2000 the average age of the population in the Southeast will rise to thirty-seven, while the average age of the workforce will be thirty-nine.

Trend Four... ***The proportion of the workforce and pool of available entrants coming into the workforce that are minority and/or female will increase substantially.***

Nationally, that proportion of the workforce which is female will rise from forty-five percent in 1987 to forty-nine percent by the year 2000; while that proportion which is nonwhite will rise from fourteen percent to sixteen percent. In the Southeast, almost eight out of every ten new entrants into the workforce will be female and/or nonwhite. By the turn of the century fifty percent of the region's workforce will be female and twenty-two percent will be nonwhite.

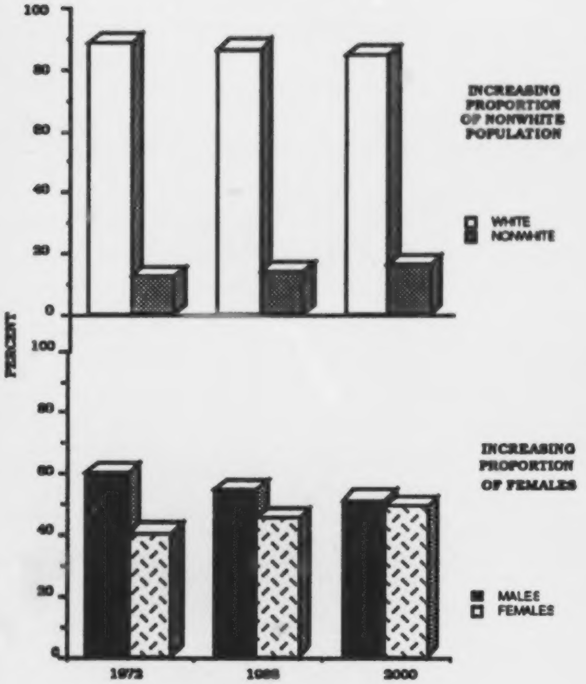
Trend Five... ***Most of the growth that will occur in the workforce will come from groups in the population that have traditionally been underutilized and/or are not ready to enter the job market because of limited work experience and/or formal education.***

Both nationally and here in the Southeast the workforce of the year 2000 will look very different from that of today. People under the age of twenty-five, as well as those age fifty-five and older will make up a smaller share. Women, Blacks, Asians, Hispanics, and other minorities which have traditionally been underutilized and/or have limited work experience and/or formal education will make up a larger share.

Historically, the labor force participation rate for men has been higher than for females, and the rate for whites higher than for nonwhites.[12] Generally, age correlates closely with years of work experience.[13] Currently the average age of the white male workforce in the Southeast is 37, compared to 38 for white females, 33 for nonwhite males, and 34 for nonwhite females.

Graphic 5

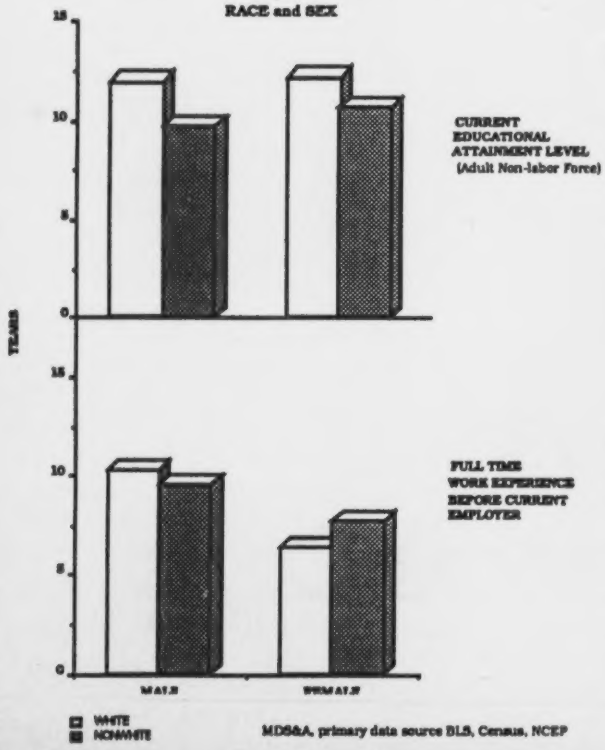
THE CHANGING WORKFORCE



MDS&A, primary data source BLS

Graphic 6

FORMAL EDUCATION AND WORK EXPERIENCE
by
RACE and SEX



MDS&A, primary data source BLS, Census, NCEP

In terms of the amount of full-time work experience individuals have gained before coming to work for their current employer, the average adult white male has 10.2 years full-time work experience, compared to 9.5 years for the adult nonwhite male, 6.4 years for the white female, and 7.7 years for the nonwhite female.

The educational attainment level for the average adult white male in the Southeast is 12.6 years of formal education, compared to 12.2 years for the nonwhite male, 12.5 years for the white female, and 12.2 years for the nonwhite female. Sixty percent of the white population in the Southeast has graduated from high school while only forty-five percent of the nonwhite population has obtained that level of formal education. Likewise, fourteen percent of the white population has graduated from college compared to only nine percent of the nonwhite population.

Graphic 7

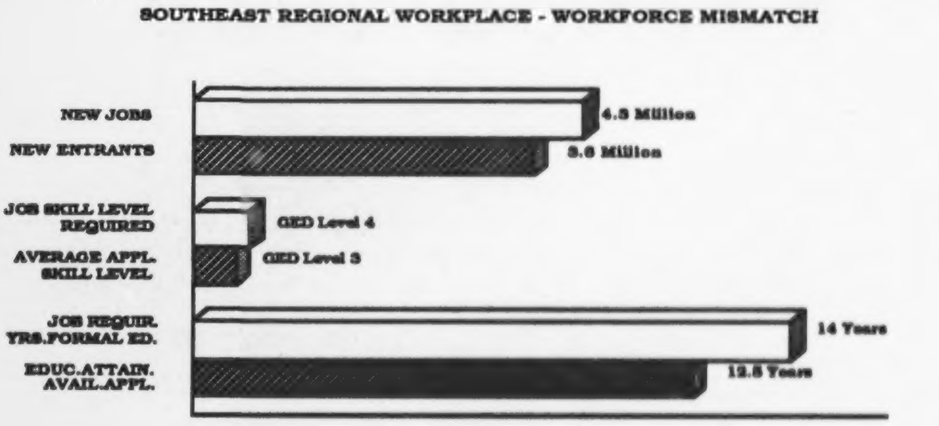
U. S. MIGRATION PATTERNS

Trend Six... ***The nation's population shift from the "Frost Belt States" of the North and Midwest to the "Sun Belt States" of the South and West will continue.***

By the year 2000, two-thirds of the people in the continental United States will live in the southern states. Furthermore, eighteen out of every one hundred will live in the eight southeastern states of Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

These six trends will continue to create a mismatch between workplace needs and workforce capabilities. In the Southeast some 4.3 million new jobs will be added to the economy between now and the turn of the century but only 3.6 million new entrants will be added to the working age population. Based on current average workforce participation rates, this means about one-fourth of the new jobs may go unfilled. Furthermore, the work to be performed in the average new job will require the worker

Graphic 8



MDS&A, primary data source BLS, NPA, NOICC, SE Reg.Ed.Bd.

to use skills normally obtained from at least fourteen years of formal education while the average educational attainment level for adults in the region is12.5 years. In terms of skill level, the average job applicant has a GED skill level of three while the average new job will require the worker to function at or above GED skill level four.

When the effect of social and economic problems such as adolescent childbearing and out-of-wedlock births, economic disenfranchisement, homelessness, drug abuse, and adult illiteracy are considered, the mismatch between the number of jobs available and the number of qualified adults available to fill them greatly increases.

These issues, once defined only as "social problems," now must be dealt with out of economic necessity. The annual cost of adolescent childbearing, homelessness, adult illiteracy, and drug abuse to the region's economy has been estimated to exceed $80 billion. **Even more important, as the labor market tightens and the availability of qualified workers becomes more limited, employers, both in the public sector and the private sector, will not be able to afford to discriminate, put workers at health and safety risks, ignore training needs and workers' obligations to family, or fail to focus on human resource management and development. This focus on human resource management and development must also include attention to those factors which inhibit entrance into the workforce. In the Southeast for example...**

> **Adolescent childbearing and parenting** represent a renewing loss of human resources from the pool of potentially employable people. The overall cost of adolescent childbearing is high. The most recent data shows that forty-seven percent of all births in the United States to girls age seventeen and under were to adolescents living in the South and over 5,000 of these births were to girls age ten to fourteen. Furthermore, eighty percent of all teenage mothers and forty percent of all teenage fathers fail to complete high school. Slightly more than one in four females who drop out of high school do so because they were married, planned to get married, or were pregnant. Females who drop out of high school are one-third less likely to enter the workforce than females who graduate. This initial loss of the teen parent who drops out of school and becomes another educationally limited person is compounded by the future loss of the teen's child or children since the most common factor among high school dropouts is that their parents were usually high school dropouts. Regionally, the public cost of adolescent childbearing is estimated to be more than $2 billion annually.[14]
>
> **The high school dropout rate** in the Southeast continues to be one of the highest of any region of the country. Almost thirty-six percent of students entering high school in the ninth grade fail to graduate with their peers at the end of the twelfth grade.[15] An estimated 250,000 students here in the Southeast drop out of school annually. That means between now and the year 2000 some 2.8 million dropouts could be added to the region's educationally limited population. Furthermore, out of every seven students who drop out of high school, one is White, two are Black, and four are Hispanic. Of those who drop out less than half will return to complete their high school education. The economic cost to the individual dropout is high since the average annual income for a person with less than a high school education is thirty-seven percent less than for a high school graduate. The overall lifetime cost of each dropout to the region's economy, in terms of lost tax revenue, welfare and unemployment expenditures, crime prevention funds, and lost productivity to employers is estimated at $60,000. This means an economic loss to the region's economy of some $84 billion between now and the turn of the century.

The educationally limited, 2.8 million dropouts, will be added to the estimated 12.1 million people currently living in the Southeast who are *functionally illiterate.*[16] Of this total, six out of ten (some 7.3 million) are not in the workforce and are estimated to be costing the region $31 billion annually in lost business productivity, unrealized tax revenue, welfare, crime, and related social problems. Some 1.2 million are currently in the workforce but unemployed and costing the unemployment insurance systems in the eight southeastern states some $1.4 billion annually. Even more important, an estimated 3.6 million educationally limited adults are currently in the region's workforce and employed. These educationally limited adults cost employers as much as $24.8 billion annually in lost time, substandard performance, and various other work related problems. Conservatively, adult illiteracy problems are already costing the southeastern regional economy $57.2 billion annually or $4,727 per adult illiterate. Between now and the year 2000 that economic loss will grow as will the impact the loss of these human resources has on the pool of available qualified workers.[17]

Economic disenfranchisement, or poverty, is basically defined as "the state of one who lacks a usual or socially acceptable amount of money or material possessions."[18] From an economic viewpoint the poverty level is currently defined as annual income of $5,980 per year for a family of one and $10,060 per year for a family of three. It is therefore estimated that between twelve and twenty percent of the region's population lives in poverty. Even more important are the growing ranks of the region's *working poor,* especially young families headed by persons under the age of twenty-five. For example, married couples, headed by a person age twenty-four or younger, lost eleven percent of their real incomes from 1973 to 1986 while female-headed families with no spouse present lost 32.4 percent.[19] White families lost 19.4 percent; Hispanic families 18.5 percent; and young Black families 46.7 percent. *Overall, the per capita income in the region in 1987 was $10,954, slightly above the annual minimum wage and the poverty level for a family of three.* The cost of poverty to the economy is enormous. Among the ranks of the working poor, an even larger share of what they earn goes to keep a roof over their heads. Often their work provides little in the way of benefits, and issues relating to family such as adequate childcare and education add to their woes.

A growing number of Homeless individuals, as well as whole families, are slipping into poverty and unable to keep a roof over their heads. On the national front, estimates of the number of homeless people range from 350,000 to 5 million.[20] The extreme deviation of such estimates affirms the fact that no one really knows the severity of this recently growing phenomenon of economic disenfranchisement. Furthermore, while the number of homeless persons within the Southeast ranges from 86,000 to 865,000, attempts to determine the actual number within a region, state, or even locality are thwarted by limited knowledge of the problem coupled with the lack of a standard definition of what constitutes homelessness. For many, the old view that the homeless are simply derelicts or shiftless drunks and/or mentally incompetents still lives. This historic picture of the homeless is giving way to the reality that the number of homeless persons increases by an estimated twenty-five percent each year, and that the fastest growing group among the homeless is families with children. Even more frightening is the fact that increasing numbers of homeless persons are working but unable to find affordable housing. Also, while the impact of homelessness is felt most in urban areas, an increasing number of homeless are to be found in suburban and rural communities. In the Southeast, all eight state governors have acknowledged that the homeless are a growing economic and social concern which must be faced. One estimate places the costs of homelessness in terms of the provision of social services and criminal justice functions, as well as lost tax revenue and consumer buying power in excess of $2 billion annually in the Southeast.[21]

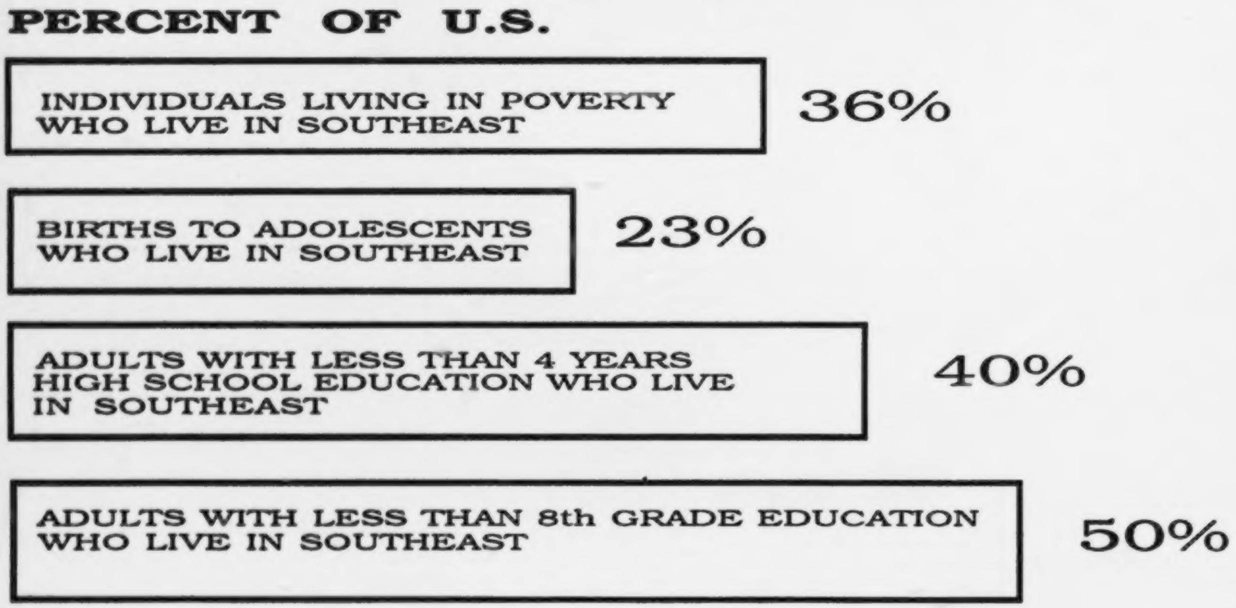
Drug abuse... The effect of drug abuse by members of the adult working age population on employers in the Southeast, as well as on the regional community-at-large, is a growing concern. Current estimates indicate as much as sixteen percent of the population age eighteen to twenty-five use some form of drugs regularly with two percent being hard core abusers.[22] With the exception of stimulants, males tend to use drugs more often than females (15% of males regularly use drugs vs 12% of females); whites tend to use drugs more often than nonwhites (35% vs 28%); those unemployed or not in the workforce tend to regularly use drugs more than those employed (40% vs 37%); and with the exception of alcohol, those with less than a high school education tend to use drugs more than those with high school or more education (26% vs 21%). For the employer, drug abuse can be very costly. In addition to reducing the number of available adults within the pool of potential workers from which employers can recruit, it is estimated that thirty-seven percent of full-time employees and twenty-nine percent of part-time employees use marijuana regularly, eight percent of full-time and four percent of part-time employees use cocaine regularly, and seventy-six percent of full-time and sixty-seven percent of part-time employees use alcohol regularly. The typical drug abusing employee is...

- late to work three times more often than the nonabusing employee,
- has two and a half times as many long term absences (e.g., absences that amount to eight days or more),
- uses three times the amount of sick benefits,
- is five times more likely to file a workers' compensation claim, and
- has almost four times the number of work related accidents.

With an estimated one-third of all employees regularly using drugs, the likelihood of use during working hours increases; so does the chance of accidents, injuries to other people, poor worker performance, lost time, theft, and other liabilities. Based on national estimates,[23] drug and alcohol abuse costs southeastern employers an average of $1,200 per employee per year or $8.8 billion annually. In terms of the loss of potential employees, drug abuse further removes an estimated forty percent of those adults age 18 to 25 who are not in the workforce from the pool of possibly employable persons. Furthermore, the fact that four out of ten high school seniors use drugs other than marijuana and that one in twenty high school seniors use drugs on a daily basis causes serious concern for the quality of new entrants into the workforce. With the growing number of new entrants into the working age population having used drugs coupled with the fact that many employers test for drug use before hiring,[24] drug abuse may further reduce the pool of potential employees available to regional employers by at least thirty percent.

Graphic 9

THE SOUTHEAST...HOME TO THE MAJORITY OF AMERICA'S POOR, EDUCATIONALLY LIMITED ADULTS, and ADOLESCENT PARENTS



As the previous sections point out, the economic cost of these social problems within the Southeast is high and the additional loss of potential workers is serious. However, the extent of the problem becomes more real when the information shown in Graphic 9 is realized. **The Southeast has more people living in poverty, more births to adolescents, and more educationally limited adults than any other region of the country.**

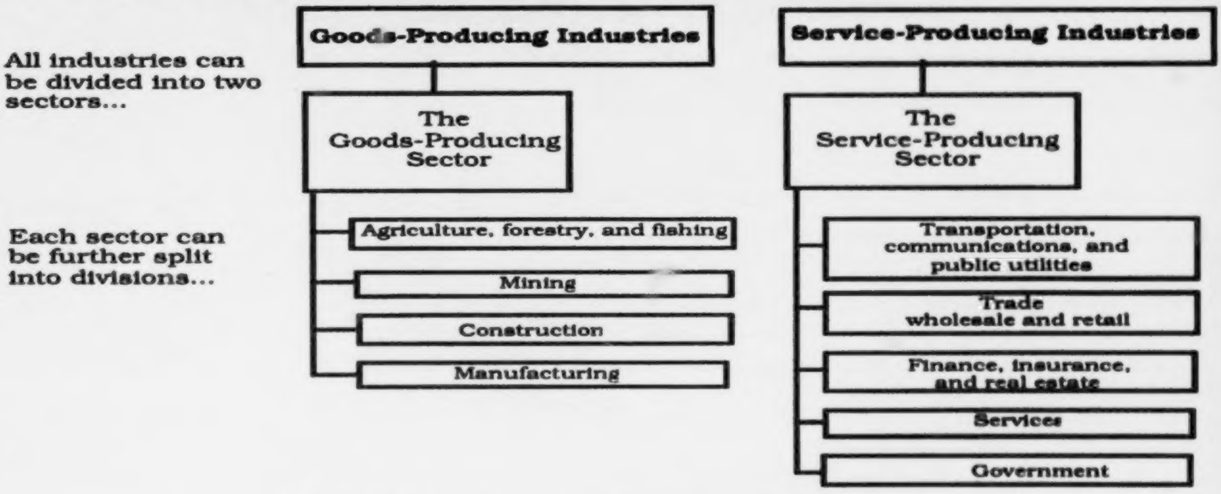
THE MISMATCH...The jobs will be here, but what about the workers?

In terms of total population and workforce, by the year 2000 it is projected that there will be 39 million people age fifteen and over living in the Southeast. Of these, an estimated 25 million will be in the workforce, an increase of about 3.6 million new entrants. At the same time there will be some 26.5 million jobs available, of which some 4.3 million will be new jobs. This means there will be about 1.5 million more jobs available than the number of people age fifteen and over in the workforce, and 700,000 more new jobs than the number of new entrants into the working age population. This projected mismatch will be exacerbated by social problems, such as those discussed previously, which if not addressed could further reduce the number of job-ready and qualified adults available in the region's recruitment pool by as much as forty percent.

For Many Southeast Employers The Year 2000 Is Already Here....

Graphic 10

DEPARTMENT OF LABOR INDUSTRIAL CLASSIFICATION SCHEME
Goods and services are produced in industries classified by sector, division, and group.


All industries can be divided into two sectors...
Goods-Producing Industries
Service-Producing Industries
The Goods-Producing Sector
The Service-Producing Sector
Each sector can be further split into divisions...
Agriculture, forestry, and fishing
Mining
Construction
Manufacturing
Transportation, communications, and public utilities
Trade wholesale and retail
Finance, insurance, and real estate
Services
Government

Each division has several groups of industries, and each group of industries has many individual industries.

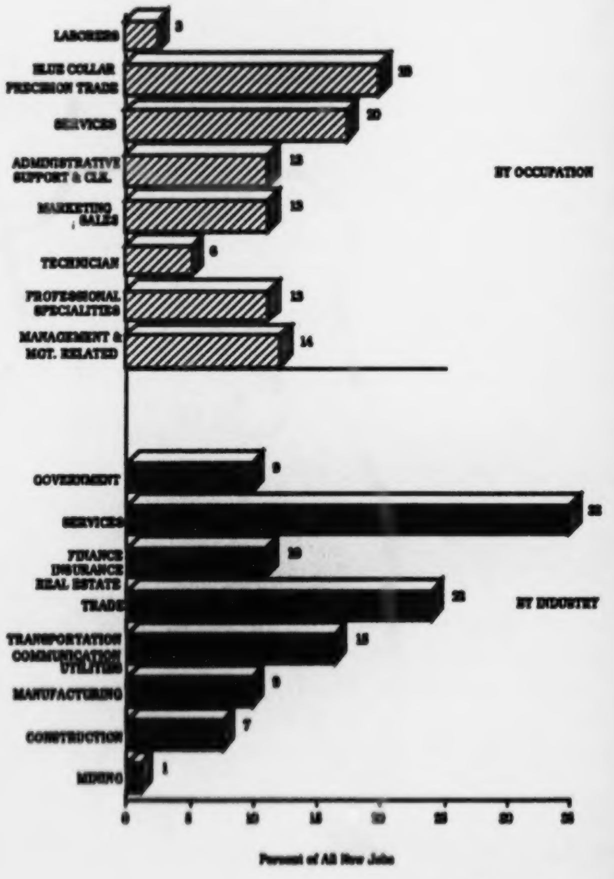
In The Private Sector....

Most of the reports and publications dealing with "*Workforce 2000*" issues have presented their messages in terms of *the private sector work place* and the U. S. Department of Labor's industrial classification scheme as depicted in Graphic 10. Based on this industrial breakdown, ninety-one percent of all new jobs in the Southeast will be with private sector employers while nine percent of the region's new jobs will be in government and the *public sector*.[25] Table 2, located in the Appendix, provides further information on where the jobs being created in the Southeast economy will be found.

Almost nine out of every ten of these new *private sector* jobs will be in service-producing industries. Even more important, the average new job will require a GED skill level of 3.5 and fourteen years of formal education. Almost one in every two new jobs will be in occupational fields which require a skill level of four or more. Furthermore, twenty-one percent, or about 900,000 of these new jobs, will require one to three years of postsecondary education (i.e.,

Graphic 11

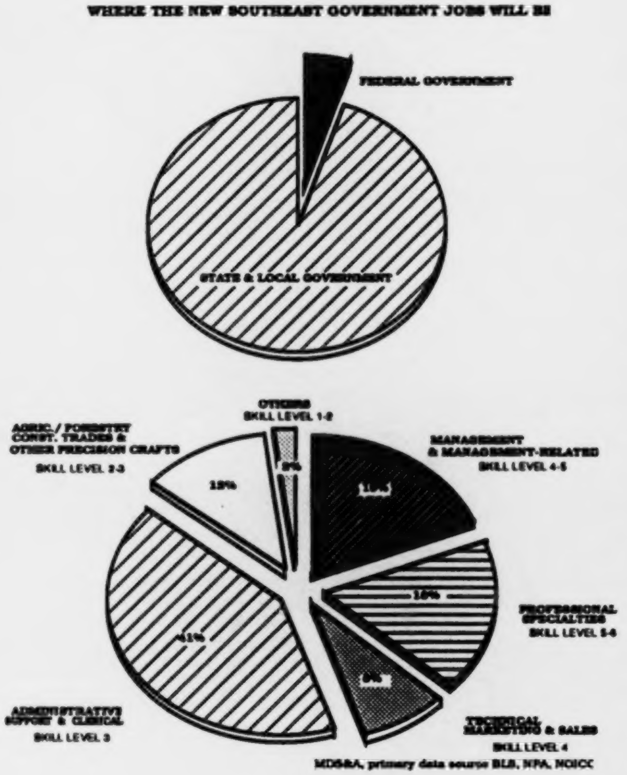
WHERE THE REGION'S NEW JOBS WILL BE



MDSAA, primary data source BLS, NPA

education normally received in two-year colleges, community colleges, vocational schools, etc.), and another twenty-seven percent or 1.2 million new jobs will require four or more years of higher education.

Graphic 12



MDS&A, primary data source BLS, NPA, NOICC

In addition, current projections indicate that between now and the turn of the century, private sector employers may need to fill between 20 and 30 million existing jobs as current employees retire, resign, or are separated from employment. Some twenty-one percent of these *replacement* jobs will require entrants to have one to three years of postsecondary education, with another twenty-two percent requiring four or more years of higher education.

On the demand side therefore, each year between now and the year 2000, regional private sector employers will need to fill some 2.7 million jobs (an estimated 320,000 new jobs and 2.3 million replacement jobs). About 573,000 of these annual openings will require one to three years of higher education and another 597,000 will require four or more years of postsecondary education. Table 3, found in the Appendix, shows the ten fastest growing occupations in the Southeast.

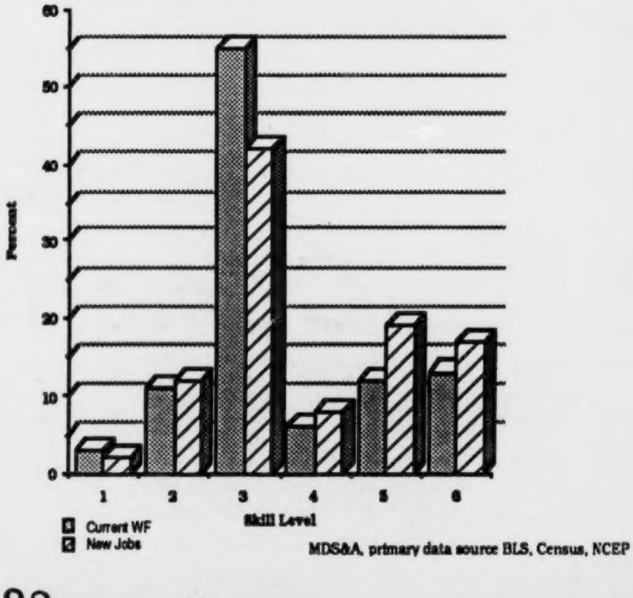
In The Public Sector....

Of the 4.3 million new jobs to be added to the southeastern's economy, some 409,000 or about nine out of every one-hundred will be in government. As Graphic 12 indicates, the majority of these new government jobs will be at the state and local level. However, a significant number will also be with Federal government agencies located throughout the Southeast.

Occupationally, forty-five percent of these new *public sector* jobs will be in managerial, professional, and technical fields which will require entrants to have a GED skill level of four or more and an average of fourteen years of formal education. However, the occupational mix and actual skill requirements of these new jobs will differ with the level of government operation involved. Overall

Graphic 13

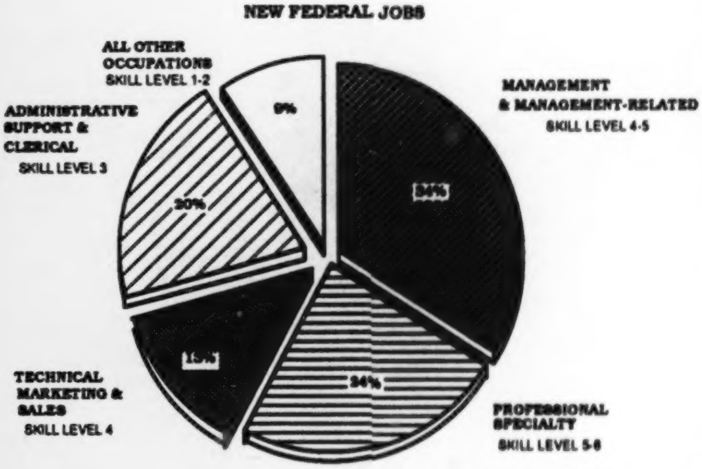
COMPARISON OF SKILL LEVEL REQUIREMENTS
Current Southeast Region Government Jobs vs. New Government Jobs



MDS&A, primary data source BLS, Census, NCEP though, as depicted in Graphic 13, the skill level required to perform the work of these new government jobs will be significantly greater than the skill level required by current government jobs.

In addition to the approximately 400,000 new jobs that public sector employers will need to fill, over seven million replacement jobs will become available as current employees retire, relocate, and are separated. Almost four out of every ten of these replacement jobs will require new entrants to have postsecondary education. Annually, public employers will need an average of 1.5 million workers to fill jobs which require the knowledge, skill, and ability typically acquired through one to three years of postsecondary education and 1.3 million new workers with four or more years of higher education. **Where will these new and replacement public sector jobs be?**

Graphic 14



MDS&A, primary data source BLS, NPA, NOICC

With Federal Government Employers....

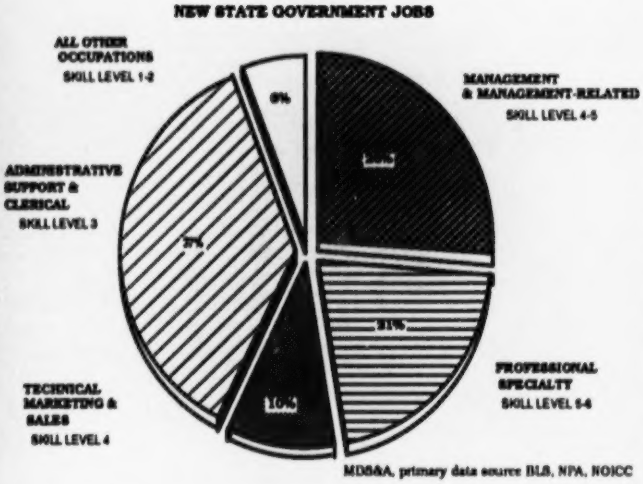
While the total number of Federal employees nationally is unlikely to grow significantly, a growing share of Federal employment is concentrated in the Southeast.[26] Current estimates indicate that between five percent (20,000) and ten percent (40,000 plus) of the region's new government jobs will be in Federal civilian employment (e.g., within Federal government agencies and Federal enterprises).

Between now and the 21st century Federal employment in the Southeast is projected to continue to grow in the managerial, professional, and technical categories and to decline in clerical and blue collar fields. Almost seventy percent of all new jobs will be in managerial, management-related, professional, and technical occupations. For example, some 4,000 accountants; 1,000 personnel and labor relations specialists; 2,000 management analysts; 3,000 engineers; 5,000 computer specialists; and 800 social scientists will be needed to fill Federal government jobs in the Southeast. On average these new Federal jobs will require entrants to have a skill level of 4.5, with six out of every ten new jobs requiring a GED skill level of five to six. Only about one third of the new Federal jobs will be in occupational fields requiring skills defined at GED level three or lower. Table 3 in the Appendix lists the ten fastest growing jobs in the Federal government in the Southeast.

With State Government Employers....

Between twenty-five and thirty-five percent of all new public sector jobs created in the region's economy between now and the year 2000 will be added to the ranks of the eight southeastern state governments. These new jobs will require entrants to have an average GED skill level of 4.2, and almost one out of every two new jobs will be in occupations which require a skill level of five to six.

Graphic 15

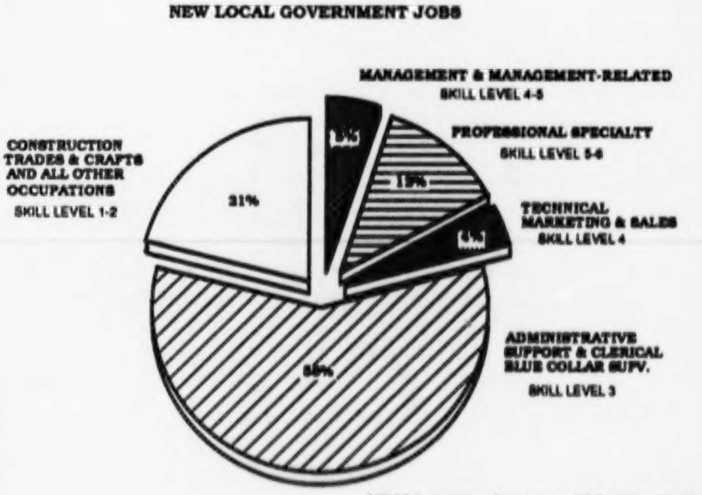


MDS&A, primary data source BLS, NPA, NOICC

Like the region's Federal employers, a majority of the new jobs (57%) state government employers will need to fill will be in the managerial, professional, and technical occupational fields. However, a large share of the new state government jobs will be in administrative support and clerical occupations (37% of new state jobs vs. 20% of new Federal jobs). Some twenty percent of these new state government jobs will require entrants to have one to three years of postsecondary education and another twenty-nine percent will require four or more years of higher education. While state employers will be seeking to fill management and management-related jobs such as personnel and labor relations specialists and management analysts, as well as professional specialties like economists and psychologists, they will also be seeking health diagnostic and treatment professionals and social service technicians. Table 3 in the Appendix lists the ten fastest growing state government jobs in the Southeast.

Finally, while regional Federal employers will experience some turnover and have thousands of replacement jobs to be filled each year between now and the year 2000, a majority of the some seven million Southeast government jobs which will need to be filled through replacement will be at the state and local level. Like the new jobs being created, the skill level of these replacement openings will continue to rise as old jobs are enhanced through the impact of technology. Over twenty percent of these restructured jobs will require new entrants to have one to three years of postsecondary education and another eighteen percent will require four or more years of higher education.

Graphic 16

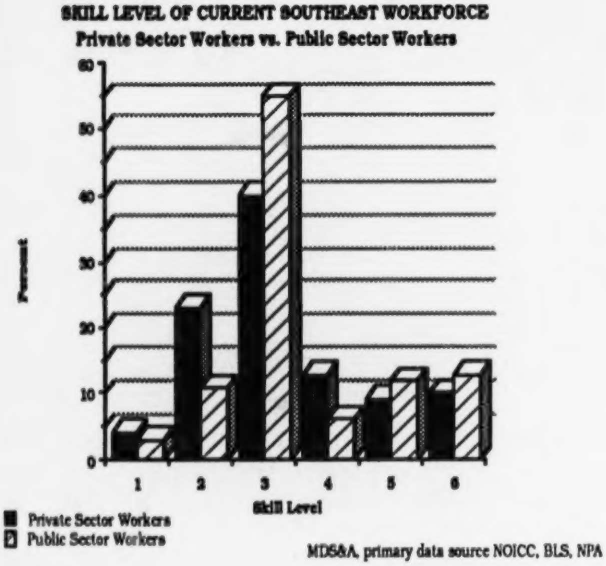


MDS&A, primary data source BLS, NPA, NOICC

With Local Governments Employers...

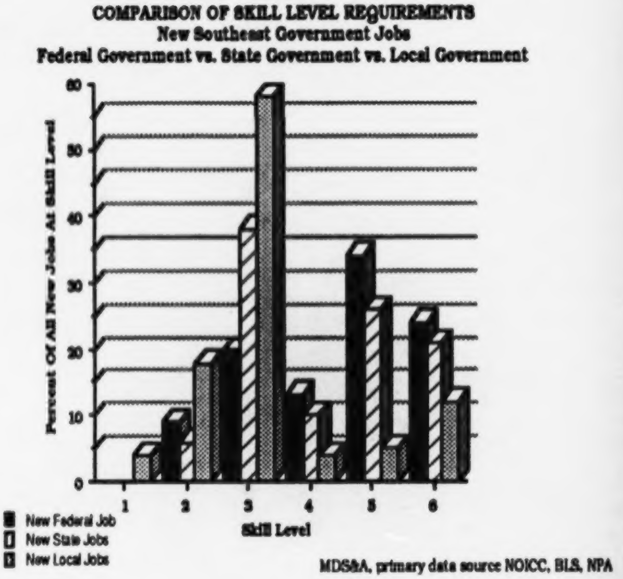
Between 200,000 and 300,000 of the new public sector jobs to be added to the region's economy between now and the year 2000 will be in local government organizations. The overall occupational mix and resulting average skill level of these new local government jobs will differ significantly from new Federal and state level jobs.

Graphic 17


SKILL LEVEL OF CURRENT SOUTHEAST WORKFORCE
Private Sector Workers vs. Public Sector Workers

MDS&A, primary data source NOICC, BLS, NPA

Graphic 18


COMPARISON OF SKILL LEVEL REQUIREMENTS
New Southeast Government Jobs
Federal Government vs. State Government vs. Local Government

MDS&A, primary data source NOICC, BLS, NPA

As can be seen in Graphic 16, the majority of new local government jobs (79%) will be in administrative support, clerical, blue collar supervisory, services, trade and craft, and laboring occupational fields. Only five percent will be in management and management-related fields and twelve percent in professional specialties. Still, eight out of every ten new local government jobs will require a GED skill level of three or more.

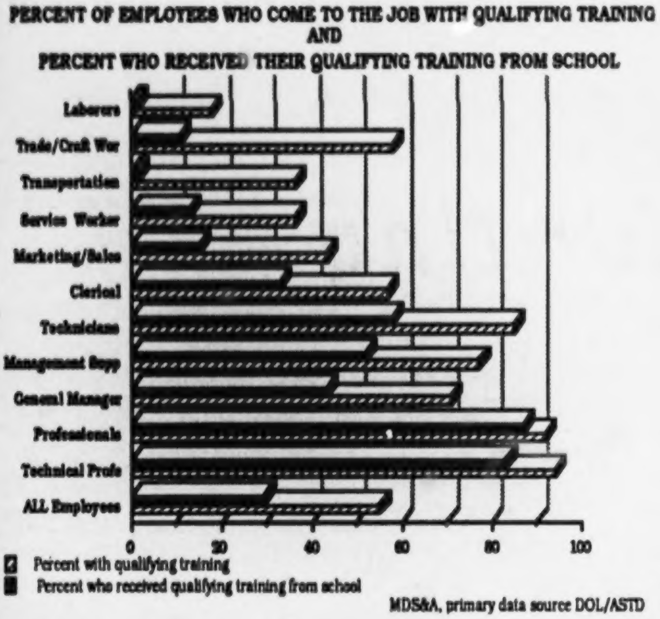
While only seventeen percent of local government jobs will be in management, management-related, and professional occupational fields, local government employers will be seeking management analysts, social workers, social service technicians, lawyers, dietitians, and nutritionists to fill new and/or vacant positions. In addition, more than one out of every three new jobs will be in service occupations, including the protective services. Table 3 in the Appendix lists the ten fastest growing local government jobs.

Besides the large number of new jobs which will be available in local governments, over 1.7 million current jobs will become vacant each year as employees retire, relocate, or are separated. Some eighteen percent of these replacement jobs will require four or more years of postsecondary education while almost one out of every two new and replacement jobs will require one to three years of higher education.

Graphic 17 shows that public sector jobs on average require entrants to have and utilize skill levels slightly higher than those required in the private sector. Federal and state government jobs on average require higher skill levels than those at the local government level or in the private sector. Federal government jobs require a mean skill level of 4.5 while state government jobs require a mean skill level of 4.2, private sector jobs require a mean skill level of 3.5, and local government jobs a mean skill level of 3.0. Graphic 18 shows the percent of new Federal, state, and local government jobs by mean GED skill level.

Today's public and private sector work environment is global in scope, constantly changing with the advances of technology, and requires workers to have and utilize higher levels of cognitive skills. In addition all workers are being asked to be more flexible, participatory, and productive. With these demands coming from the workplace, public and private sector employers are finding it more and more difficult to find and hold qualified workers.

Graphic 19



MDS&A, primary data source DOL/ASTD

The Supply Side...

Between now and the turn of the century, less than 3.6 million new entrants will be added into the region's working age population. Of these, eight out of every ten will be females, minorities, and/or immigrants. The qualifications of many of these new entrants, however, may not match the requirements of the new jobs being created. A current joint research project of DOL and the American Society for Training and Development (ASTD)[27] has found that only fifty-five percent of all employees come to the job with sufficient qualifying education and/or training. Even more startling is the fact that of those with sufficient qualifications, only twenty-nine percent received their qualifying training from schools. Graphic 19 shows the percentage of employees who come to the job with sufficient qualifying education and/or training by broad occupational category. It is clear that many possible entrants into the workforce do not have sufficient skills or experience to qualify for the new jobs being created. While eighty-five to ninety percent of professionals come to the job with sufficient qualifying training, less than sixty percent of clerical, marketing and sales, service, and transportation workers and laborers come to the job with sufficient qualifying training (see Table 4 in the Appendix for further information on qualifying and upgrading training). For example, among those white male adults not currently in the workforce the mean educational attainment level is 11.9 years, 9.7 years for nonwhite males, 12.2 years for white females, and 10.7 years for nonwhite females. In addition, the traditional labor force participation rate for individuals with low educational attainment levels is itself low, only thirty-three to fifty-eight percent of these educationally limited adults ever enter the workforce.

Based on current data,[28] about four out of every ten new entrants to the workforce will be a high school graduate, two will have one to three years of postsecondary education, and two will have four or more years of higher education. However, more and more students graduating from our high schools have reading, math, and reasoning levels below that needed to perform satisfactorily on the job. The average job today requires skills at about the twelfth grade level; yet, only five to seven percent of our high school graduates can...Synthesize and learn from specialized reading materials, solve multi-step math problems and use algebra, and infer relationships and draw conclusions using detailed scientific knowledge.[29]

Furthermore, an estimated thirty percent of freshmen entering regional institutions of higher education require remedial assistance.[30] It doesn't matter if the new freshman is coming into a two-year or a four-year institution. Both types of postsecondary institutions report the same problem. Even more disturbing is the fact that thirty percent of the region's postsecondary institutions report that at least thirty percent of their total enrollments participate in some remedial instruction. For many employers, therefore, today's college graduate still lacks sufficient knowledge, skill, and ability to perform in today's work environment. One study[31] found that...

- between forty and sixty percent of those with two or four year college degrees could not identify appropriate information in a lengthy newspaper column or generate an unfamiliar theme from a short poem,
- between sixty and eighty percent could not orally interpret the distinctions between two types of employee benefits,
- between forty and sixty percent could not use a bus schedule to select an appropriate bus for given departure and arrival times,
- eighty percent could not determine the amount of interest charges from a loan ad, and
- between forty and sixty percent could not determine the correct change using a simple restaurant menu.

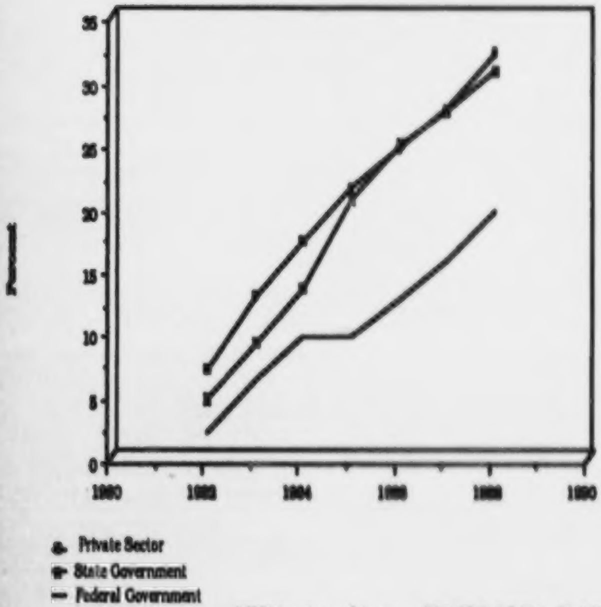
Employers, public and private, are being faced with the costly realization that the *basic skills gap* between their job needs and the qualifications of entry level workers available is widening, not only with regard to the basic skills of reading, writing, mathematics, and communications, but also in the *new basics* of *problem-solving, team work, initiative, reasoning, and adaptability.*[32]

The number of people entering the Southeast's working age population and its resulting workforce is declining. At the same time, a large proportion of those who are entering the workforce come from groups in the general population which have been traditionally underutilized and/or have limited formal education and work experience. Therefore, the pool of qualified workers available to fill the region's new cognitively oriented jobs is beginning to shrink.

Graphic 20

RISE IN TOTAL COMPENSATION FROM 1982 - 1988

By Type of Employer



MDS&A, primary data source BLS, OPM, S.E.State Merit Systems

Labor Shortages and Wage Inflation Begin...

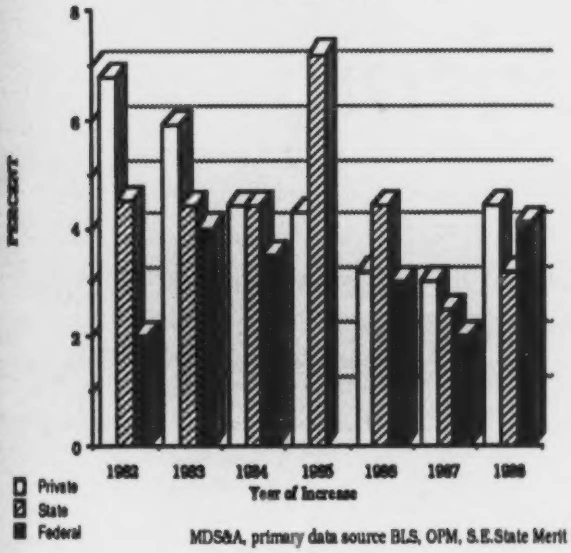
As a result of the mismatch between workplace needs and workforce capabilities, labor shortages are beginning to occur and wage inflation has already begun as employers, public and private, try to outbid each other for the limited supply of qualified workers available. Since 1982 total compensation for Southeast private sector employees has risen thirty-two percent[33] and the costs of recruiting and hiring one employee now averages about $3,500, with the costs for many jobs exceeding $7,000.[34]

The most frequent method of recruiting new hires is still the acceptance of walk-in applications,[35] since placing applications directly with the employer is still the most frequently used job search method by job seekers. However, as the number and quality of applicants obtained through this traditional labor exchange method decrease

Graphic 21

COMPARISON OF ANNUAL INCREASE IN TOTAL COMPENSATION

By Type of Employer



MDS&A, primary data source BLS, OPM, S.E.State Merit Systems

more and more employers are using alternative recruiting sources. Employers, public and private, are conducting recruiting visits to colleges and other postsecondary institutions, advertising in newspapers and professional publications, participating in job fairs, and using the services of employment agencies. For many employers, however, even these alternative efforts produce unacceptable results, as the number and quality of postsecondary graduates in high-demand occupational fields begin to fall short of the number required. For example, as Table 5 located in the Appendix shows, here in the Southeast it is projected that there will be an average of 167,000 openings in management and management-related jobs requiring postsecondary education, while regional postsecondary schools will graduate only about 71,000 individuals with degrees in business and management-related fields annually. Likewise, some 21,000 engineers will be required annually while only 18,000 will graduate each year. The projected void will exist for technicians and technologists jobs as well. Estimates indicate that 15,000 engineering technicians and 34,000 health technicians will be needed annually, while regional schools will graduate less than one-third these numbers. The number of anticipated graduates listed for each occupational field shown in Table 4, however, does not reflect the number of students who graduate from regional schools that move out of the region. Therefore, the projected mismatch between the number of graduates and the number of job openings may be greater if southeastern employers fail to compete favorably in terms of compensation and other work related factors with employers from other regions.

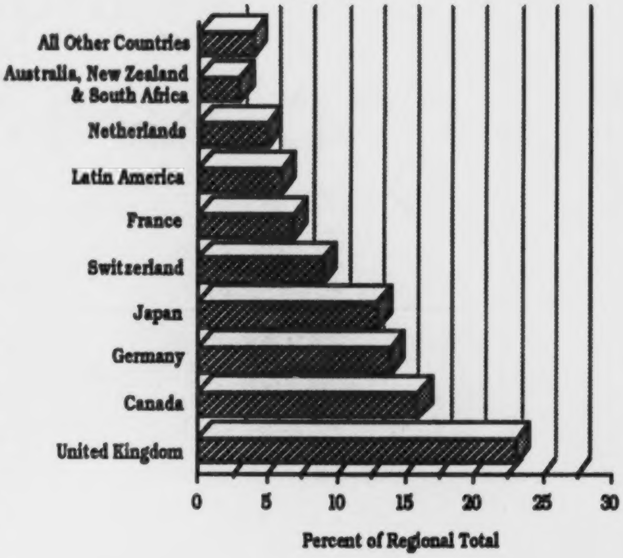
The upward spiral of wages creates even more of a crisis for public sector employers. While the total compensation of public sector employees, particularly Federal and state workers, has also increased about thirty-one percent since 1982,[36] public employees still earn about twenty-five percent less than their private sector counterparts.[37] This ever increasing deviation between public sector and private sector compensation serves to further limit the ability of public employers to recruit and retain qualified workers. Four recent *"Workforce 2000"* studies, which specifically addressed the public sector employer, all cited compensation deviation as a major deterrent to obtaining sufficient numbers of qualified workers within the public sector employment arena.[38] This lack of competitive compensation further fuels the rising costs of recruitment and hiring for the public employer. Since they seldom can match private sector compensation, public employers often see their jobs remain vacant for extended periods of time as they are forced to seek applicants through ever widening geographical areas of recruitment.

A further complication affecting both public and private sector employers and fueling compensation inflation is turnover. Not only do many new hires jump from one employer to another in search of better pay, but many employers are finding it increasingly difficult to retain experienced workers. While employees who have been "*vested*" in employer pension plans and with other benefits are often reluctant to leave and start over with a new employer, many are nevertheless enticed with special incentives. Employers who are experiencing difficulty in finding high-skilled and experienced workers may "find" needed human resources via some third party who seeks out and obtains the services of experienced professional and technical workers on behalf of *anonymous employers*. Such "*theft*" of long-term and experienced workers can be very costly for the losing employer. Here again, the public sector employer is at a competitive disadvantage. First of all, the public sector employer often becomes the employer raided, as trained and experienced highly skilled workers leave public employment for better paying private sector jobs where wages and benefits are not "*capped*." As`several reports indicate, this drain of mid-career technicians and professionals further exacerbates the effect aging has on the workforce, particularly the public workforce at the Federal level.[39] While older workers are usually more stable and experienced, they are also more resistant to change and less flexible when it comes to accepting and dealing with new work alternatives and requirements.

Graphic 22

FOREIGN BUSINESS ORERATIONS IN SOUTHEAST REGION

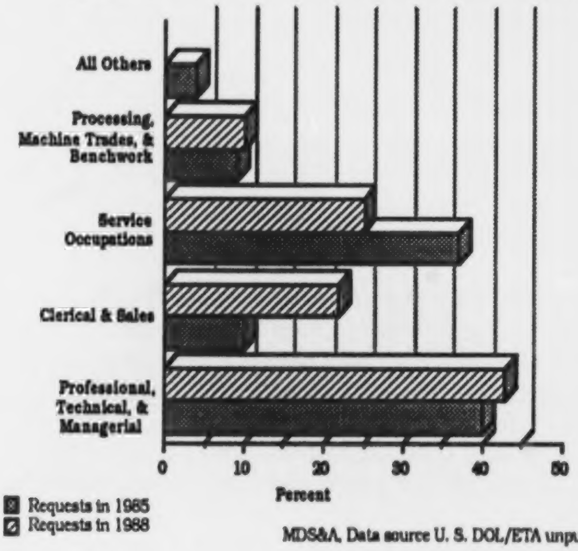
By Country



MDS&A, primary data source U.S.DOC, International Trade Adm.1987

Graphic 23

OCCUPATIONS FOR WHICH ALIEN CERTIFICATIONS WERE REQUESTED IN SOUTHEAST REGIONAL AREA DURING 1985 and 1988



MDS&A, Data source U. S. DOL/ETA unpublished 1989

In order to locate and encourage available qualified applicants to come to work for them, many private sector employers are offering incentives such as hiring bonuses, transportation assistance, relocation expenses, child care, flexible work schedules, and other benefits. Incentives and benefits which the public sector employer often cannot match because current laws and regulations generally restrict or forbid such recruiting and hiring incentives.

Even with recruitment and hiring incentives, expanded benefits, and higher levels of compensation, many public and private sector employers still find it increasingly difficult to find sufficient numbers of qualified candidates, particularly for critical high-skill jobs. In an effort to find applicants, some employers are recruiting internationally and seeking to fill their critical high-skill jobs with certified alien workers. Recruitment of foreign workers occurs with foreign owned and operated businesses located in the region, and also with other Southeast employers, public and private, who are seeking qualified workers but cannot find them in the American population.

While some requests for alien certifications originate with foreign owned businesses[41] most of them come from other regional employers who are having difficulty recruiting and hiring qualified workers. Since 1985, the total number of requests received by the Southeast Regional Office of the U. S. Department of Labor's Employment and Training Administration for non-agricultural Alien Labor Certifications has increased by almost one-third. As Graphic 23 shows, last year over forty-three percent of these alien certification requests were for professional and technical occupations and twenty-two percent for clerical and sales workers.

The U. S. Department of Commerce estimates that there are over four thousand foreign owned and operated businesses in the Southeast.[40] Table 6, found in the Appendix, shows those countries with business operations in the eight southeastern states. In terms of investment, almost sixteen percent of all foreign investment in the U. S. is in the Southeast. All totalled, there are over $47 billion in foreign investments within the region.

Employers Begin To Look Inward...

Because of the ever-increasing difficulty and cost of hiring new employees recruited from outside the organization, more and more employers, public and private, are being forced to look within their organizations for potential applicants to fill the new high-skill jobs being created.

Many employers have reported changing their recruitment and selection procedures over the past few years. While half of all employers responding to a recent survey by the Bureau of National Affairs[42] reported expanding their recruitment and selection procedures to include college and postsecondary school visits, job fairs, newspaper and other publication advertising, etc., over ninety percent also reported that they *look internally* when trying to fill vacancies.

With an estimated eighty percent of those who will be employed in the year 2000 already in the workforce it makes good sense for employers to seek to better utilize these individuals. Today's employee, therefore, can expect to change jobs seven times and occupations three times during their work-life. However, forty percent of today's workers have educational limitations which prevent them from qualifying for the new high-skilled jobs being created. These skill deficiencies further frustrate employers' recruitment and selection efforts and cost employers through higher turnover, more absenteeism, higher rates of injuries on the job, waste, lost productivity, increased costs for remediation, reduced product quality, and ultimately a loss in competitiveness.

In an effort to facilitate better utilization and production of employees, and to enhance their potential for promotion, reassignment, and transfer to new jobs, employers have increased their expenditures for training and employee development. In 1988, U. S. employers spent $39.6 billion on formal training.[43] Of those employers providing training, twenty-four percent were providing their employees with remedial basic education...fifty-two percent were providing training in listening skills, forty-one percent in writing skills, and nineteen percent in reading skills. Tables 7 through 10 in the Appendix provide detailed information on the types of training provided by American employers, who gets trained, and the industries providing training. Unfortunately, however, even though a considerable amount of money is spent each year on employee development, few employers conduct formal training needs analysis and/or literacy audits to identify those individuals most in need of training. Furthermore, the majority of employer provided training is for management skills and development, supervisory skills, and technical skills updating. Only thirty-five percent of all employees have received any upgrading training, and only eleven percent receive such formal training from their employer. While many employers complain about the skill deficiencies of new hires and other employees, less than one in four middle-to large-sized employers provide remedial basic education for their employees. In the Southeast, only about ten percent of employers provide their employees opportunities for remedial basic education. Employers who are most likely to provide basic skills training include those in manufacturing, business services, health services, educational services, and public administration.

National Attention Shifts to Building A Quality Workforce...

The critical nature of the issues facing our country, coupled with the magnitude and urgency of the challenges they present, prompted the Secretaries of Labor, Education, and Commerce to unite and expand their Departments' individual efforts toward ***Building A Quality Workforce***. In July, 1988, the three Secretaries convened a conference of representatives from academia, business, education, foundations, government, labor, and the media.[44] These national leaders came together to review the trends affecting the economy, the implications of social issues, and to continue gathering information from the private and public sector for policy formulation. Among other things, this conference and the supporting staff research found that...

- **The economy and the workplace are changing rapidly, and the pace of change is accelerating.**

  It is estimated that ninety percent of all scientific knowledge has been generated in the last thirty years and that this pool of knowledge will double again in the next ten to fifteen years. Furthermore, the product life cycle has collapsed from the ten to fifteen year cycle common earlier in this decade to a current three to five year cycle.

- **Jobs themselves are changing in content and skill requirements, regardless of type or size of employer.**

  Work is being reorganized and production techniques altered. We now see just-in-time and batch production, customized services, autonomous work groups, matrix organizations, and more. Also, jobs are requiring more initiative and greater independence of action by the worker.

- **The "Basic Skills Gap" between employer needs and the qualifications of available entry level workers is widening.**

- **Employers are almost unanimous in their feeling that the competencies of entry-level workers are deficient; including their basic skills of reading, writing, mathematics, and communications, as well as their ability and skill in problem-solving, team work, initiative, reasoning, and their adaptability.**

- **These skill deficiencies in the workplace are costing American employers monetarily through waste, lost productivity, increased remediation costs, reduced product quality, and an ultimate loss in competitiveness.**

What does all this mean for the Southeast?

Over the past several months considerable effort has been undertaken in both the public and private sectors to raise the level of awareness of the potential mismatch between workplace needs and workforce capabilities. These efforts have also stressed the impact social problems have in further reducing the number of qualified adult workers available to fill the new cognitively oriented jobs being created in the region's economy. Every state in the Southeast has studied these issues. Each governor has appointed a commission, task force, or committee to study, discuss and make recommendations on how best to address problems of adult illiteracy, homelessness, drug abuse, adolescent childbearing, etc. In addition, the National Governors' Association, the Southern Growth Policies Board, the Commission on the Future of the South, and many other organizations have studied these problems and urged their members to take action, particularly to improve the region's educational systems. As a result, the Southeast leads the way in efforts to improve the quality of education received by its citizens.[45] The eight southeastern states have been among the first to:

- set statewide testing requirements for entry into teacher education programs;
- have programs that require testing teachers for initial certification;
- establish performance-based teacher assessment programs;
- implement career ladder programs for teachers;
- establish loan/scholarship programs to encourage college students to enter teaching;
- establish academies for school principals to help improve school leadership;
- raise high school graduation requirements and administer tests to assure students have acquired basic skills prior to graduation;
- establish programs for advance placement, advance diplomas, and expanded use of kindergartens; and
- increase funding for education.

Every state in the region has moved toward a "*vision of the year 2000.*" Public and private partnerships, such as those funded through the Job Training Partnership Act, have helped fund pilot programs to address adolescent childbearing, school dropout problems, and adult illiteracy. The region's State Employment Security Agencies have begun to mobilize their resources to help employers find and develop the qualified workers they need. Coalitions have formed to focus employers' attention on human resource management and development, as well as work-family issues. **Much has been accomplished, but as the 1986 report of the Commission on the Future of The South put it...*we are only halfway home and still have a long way to go.***

In order to be competitive in today's labor market, all of us...*workers, employers, educators*...must adjust to the changes occurring and address the challenges facing us. If the Southeast is to continue to prosper into the 21st century it must ***Build a Quality Workforce***. ***Southeastern employers, public and private,* must...**

(1) **Improve ways of anticipating future workforce needs and communicating these needs to EDUCATORS, PARENTS, STUDENTS, and Others who can help address these needs.**

Currently, almost one out of every ten large private sector employers and three out of ten large public sector employers lack formalized procedures for human resource needs forecasting and planning. In addition, even though half of all new jobs created are in organizations that employ fifty or less employees, the majority of small-to medium-sized employers lack formalized human resource forecasting procedures or such human resource planning. In order to properly forecast human resource needs, employers should seek out and utilize labor market information such as that available to them through State Employment Security Agencies' labor market and research units and State Occupational Information Coordinating Committees. Once employers have a more accurate understanding of their staffing and employee development needs, this information should be shared with employees, educators, and others who can help facilitate cooperative efforts to meet these needs.

(2) **Institute procedures and programs to facilitate the entry of more people into the workforce and designed to provide for a quality work life and to accommodate and assist workers in coordinating their family-work connection. This includes the implementation of dependent-care programs , flexible work schedules, and cafeteria benefit plans.**

For several years now, human resource management experts have urged employers to develop and utilize procedures and programs designed not only to provide for a quality work life but also to accommodate and assist workers in coordination of their family and work life. Estimates indicate that eighty percent of women in the workforce are of childbearing age and that ninety-three percent of these women will be pregnant during their work years. Furthermore, mothers with preschool children are the fastest growing segment of the workforce. Yet, even though sixty-five percent of employers agree that child care initiatives would be beneficial because they decrease turnover and absenteeism, increase employee commitment, lead to higher productivity, boost morale, give the company an edge in attracting and retaining desirable workers, and are good for public relations, only about two percent of all employers provide direct child care.[46] About one in four provide some information and referral services on child care. However, very few employers have extended this concept to provide for "*dependent care*," e.g., programs designed to address the care needs of children and adults. More and more employers are, however, beginning to utilize alternative work schedules. The term alternative work schedule covers the wide variety of work arrangements that differ from the standard eight-hour day, five-day workweek. By far the most popular alternative work arrangement appears to be the use of permanent part-time schedules. Seventy-five percent of employers employ permanent part-timers; thirty-six percent use some form of flexitime, thirty-one percent allow staggered hours, twenty-five percent a compressed workweek, sixteen percent job sharing, and about one percent job rotation.[47] However, only four percent of public employers have instituted some form of quality of work life programs while twenty percent of key private sector employers have done so.

(3) Increase the number of "job ready" applicants in the recruitment pool through such initiatives as, school/work study programs, internships, cooperative education programs, job readiness training for applicants, and other free or low-cost pre-employment skills training. Institute formal procedures to identify current employees who suffer educational limitations and provide *Basic Skills Training.*

Few employers, public or private, make use of special recruitment and hiring techniques such as school-work study programs, internships, apprenticeship and cooperative education programs. Hardly any provide job readiness and pre-employment skills training designed to increase the pool of qualified applicants from which to recruit. While eighty-one percent provide new employee orientation, only fifty-two percent provide training in listening skills. Forty-one percent provide training to improve writing skills, and nineteen percent provide training to improve reading skills. Furthermore, while both public and private employers spend a considerable amount of money on training and employee development, almost three out of every ten large public employers and four out of ten large private employers fail to conduct employee needs assessments, and only one in four provides any kind of remedial basic education.

While all employers, public and private, must do a better job of anticipating future workforce needs; institute procedures to facilitate entry of more people into the workforce (particularly procedures and programs designed to provide for a quality of work life and accommodate and assist workers in the coordination of family and work life), and increase the number of job ready applicants through the use of innovative recruitment and hiring practices, many voices today argue that if *public employers* are going to be able to successfully compete in the labor market they must also[48]...

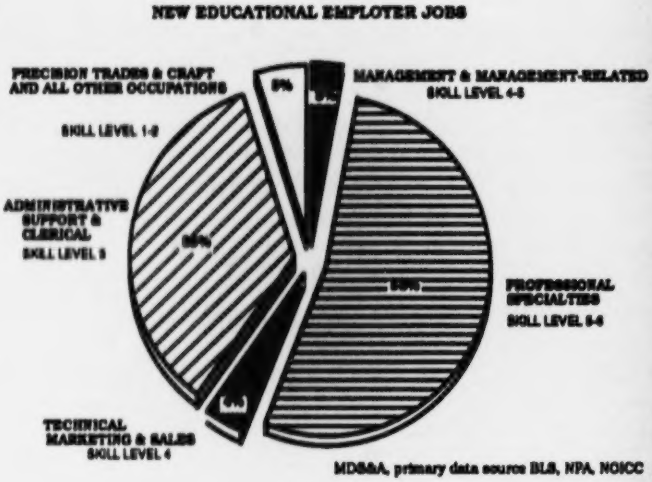
- **Take action to rebuild public trust in government;**
- **Simplify hiring procedures and clear away obstacles which prevent public organizations from attracting talented applicants from all parts of society. Continue to emphasize the hiring, training, and promotion of women and minorities;**
- **Develop systems to build student awareness of and educational training for the challenges of government and the public service;**
- **Develop new channels for "spreading the word" about government jobs and the positive records of public servants;**

- **Build a pay and benefits system that is both fair and competitive;**
- **Improve government working conditions;**
- **Provide managers the framework within which they can manage programs and personnel in a more flexible manner; and**
- **Build a stronger partnership between government executives, both those who are political appointees and career service government rank and file workers, the educational community, and all others who can help *Build A Quality Public Service.***

The Educational Community...

While education reform efforts have brought undeniable progress, particularly at the presecondary and secondary educational levels, the educational community must...*not only concern itself with the programmatic issues facing it, but also remember that, as an employer, it too faces the problems associated with the workplace-workforce mismatch.*

Graphic 24



MDS&A, primary data source BLS, NPA, NOICC

In the Southeast in the year 2000 about one out of every five service-industry jobs will be in education. In many local areas, the educational community, particularly the public education system, is the largest employer. While at least one out of every two new jobs created in educational institutions between now and the year 2000 will be in a professional specialty area, thirty-nine percent of all new jobs will be in administrative support, clerical, services, trade and craft, and laboring occupational fields. As demographic changes in the region occur, educational employers will find that not only will the types of jobs they must fill change, but also, that the quality of available applicants will change. For example, between now and the year 2000 the region's population for age group zero through fourteen will increase (age group 0-4 up about 3%, group 5-9 up about 10%, and group 10-14 up slightly less than 20%) while age group fifteen through thirty-four will decline (age group 15-19 down about 2%, group 20-24 down 15%, and group 25-34 down about 10%). This age shift in the population will mean an increased need for pre-elementary, elementary, and secondary level teachers, counselors, and librarians as well as teacher aides, bus drivers, cafeteria workers, etc., and a decreasing need for the traditional postsecondary level teacher. Couple this shift with the increased demands from the workplace for workers who not only have higher level skills but who are flexible and able to change with the changing responsibilities of their jobs, and the demands on postsecondary educational institutions change.

Educational administrators will need to hire some 52,000 teachers, counselors, and librarians annually while the region's colleges and universities are graduating only about 39,000 each year. The void is particularly critical for math, science, and foreign language specialists. In addition, the region's educational systems will need to fill jobs for social scientists, health practitioners, computer specialists, and other professional specialties which will be in high demand by all sector employers. While most of these professional jobs require a skill level of five to six, four out of every ten jobs which will need to be filled will require entrants to have a skill level of three or lower. As an employer, therefore, educational institutions, particularly public organizations such as local school boards, will face the same challenges other employers, public and private, are facing with regard to hiring and retention of qualified workers. This means educational administrators from the pre-elementary level through the postsecondary level must acquaint themselves with the demographic, economic, and social trends affecting all employers and take the proactive measures needed to be competitive.

With regard to programmatic challenges, educators need to continue to concern themselves with educational reform as it relates to the pre-elementary through secondary levels. However, they must also concern themselves even more with how the postsecondary system is or is not meeting the needs of employers and workers for the 21st century.

While the skill levels of secondary and postsecondary graduates seem to be improving, educators need to strengthen both curriculum and student performance standards. Specific attention needs to be placed on the seven skill groups identified by the DOL/ASTD research project. Since only fifty-five percent of all employees come to the job with sufficient qualifying training, and only twenty-nine percent of those employees received their qualifying training from the school system, it is apparent that many educators are not translating the needs of employers into what happens in the classroom. Classroom activities must not only address the *"3 R's"* (reading, writing, and computation), but also *teach students how to learn.* Teachers in our secondary and postsecondary educational systems must ensure that students *develop better listening and oral communication skills, learn to think creatively, have the ability to problem-solve, have self-esteem and the ability to set goals, are self-motivating, have good interpersonal and teamwork skills, and learn how to deal in organizations effectively.* More emphasis is needed on developing procedures and programs which allow teachers to gain a better and more timely understanding of the needs of the workplace. For example, secondary and postsecondary educational institutions should establish permanent "forums" which allow the exchange of ideas between employers and teachers. The employer/education connection must move beyond simple "adopt-a-school" and "career day" programs to more in-depth interchange and cooperation.

Postsecondary institutions should look closely at demographic trends and the occupational training needs of the jobs being created in the economy to ensure that educational and degree programs provide sufficient numbers of new entrants to the workforce who have the prerequisite training to meet the needs of employers. By the year 2000 twenty-four percent of the youth here in the Southeast who are of traditional college age will be nonwhite. Yet today only fifteen percent of those enrolled in institutions of higher education are nonwhite. Furthermore, only nine percent of the nonwhite population has graduated from college. Of those minorities who do attend postsecondary institutions, most participate in two year programs. As Table 12 in the Appendix shows, minorities make up about thirty-seven percent of students in two-year programs while they make up only eighteen percent of undergraduate students, ten percent of graduate students, and seven percent of those in first professional degree programs. While minorities make up thirty-seven percent of those in two-year programs, only nineteen percent of associate degrees are awarded to Blacks. Blacks are awarded only six percent of bachelor's degrees, five percent of master's degrees, and four percent of doctorial and first professional degrees. If the demographic projections are true and minorities are going to make up a larger share of the new entrants into the workforce, then more affirmative measures must be taken to ensure that this group receives the education needed to qualify for the high-skill jobs being created in the Southeast.

Not only must the postsecondary educational system be concerned with ensuring that minorities and females have the opportunity to gain postsecondary education, but the system must also ensure that the number of individuals receiving degrees and certificates is adequate to meet the needs of the job market. As Table 5 in the Appendix shows, some 167,000 openings for management and management-related jobs are projected each year from now to the year 2000, yet the region's postsecondary institutions currently award only about 71,000 degrees in educational fields which typically are required to enter these jobs. Similarly, some 21,000 engineering, architecture, and surveyor jobs will open while only 18,000 degrees in the prerequisite fields are awarded annually; some 51,000 teachers, librarians and counselors will be needed each year while only 39,000 degrees in the appropriate fields of study are awarded each year; and some 129,000 technicians and technologists will be needed annually while only 87,000 degrees are awarded annually. In order to meet the needs of the labor market, more emphasis by secondary and postsecondary institutions must be placed on career choice. Institutions must better utilize their counseling staffs and the technology available through the various state career and occupational information systems to ensure that the degree programs being offered and chosen by students will produce the numbers of graduates needed by the labor market.

In addition to these postsecondary programmatic concerns, specific attention must be given to improving the educational opportunities of those who drop out of school and all other educationally limited adults. In 1988, an estimated $85 million was spent on adult education in the Southeast, $21 million in Federal grant funds and $64 million in state matching funds.[49] Of this total, almost fifty-nine percent ($49.8 million) was spent in Florida. Half of the southeastern states failed to match their Federal grant funds for adult education with an equal amount of state funds. Adult and vocational education programs throughout the Southeast must be expanded and closer coordination with employers developed if those some now call the "*forgotten half*" of our society are to be adequately served.

In its report, *Challenge 2000*, the Southern Regional Education Board suggests, among other things, the following goals for education in the Southeast:

- each school system establish pre-school and kindergarten programs to help at-risk children prepare for school;
- student achievement for elementary and secondary students surpass national norms;
- the student dropout rate be cut in half;
- ninety percent of all adults have a high school diploma or equivalent;
- four out of every five students entering college will be ready for college level work;

- significant gains be achieved in the mathematics, sciences, and communications competencies of vocational education students;

- the percentage of adults who have attended college or earned two year, four year, and graduate degrees be at the national average or higher;

- the quality and effectiveness of all colleges and universities be regularly assessed, with particular emphasis on the performance of undergraduate students; and

- all states and localities have schools with improved performance and productivity demonstrated by results.

In Summary...

This report has sought to outline the demographic, economic, and social trends impacting the Southeast and to share some thoughts concerning...*The changes and challenges facing our economy and labor markets, the magnitude and urgency of these challenges, and our need to* ***Build a Quality Workforce.***

If the Southeast is to close the gap between the skills needed by employers and the skills possessed by job applicants and employees, and build the quality workforce needed to be competitive in the global economy, efforts must be undertaken to:

Inform the public as well as all employers of the trends which are occurring and their possible impact.

Improve the quality of education provided all citizens through continued education reform.

Mobilize all employers to assist schools in ways that capitalize on their comparative strengths and advantages.

Shift from a short-range "Bottom Line" maximization of profit orientation of management to a long-range "Comprehensive" maximization of human capital orientation.

And...Mobilize the community . . . all sectors . . to integrate efforts to ensure a quality education for all people and a quality workforce for our nation, region, State and locality.

APPENDIX

Table 1

U. S. DEPARTMENT OF LABOR GENERAL EDUCATION DEVELOPMENT (GED) SKILL LEVEL DEFINITIONS

	REASONING DEVELOPMENT	MATHEMATICAL DEVELOPMENT	LANGUAGE DEVELOPMENT
LEVEL 1	APPLY COMMON SENSE UNDERSTANDING TO CARRY OUT SIMPLE ONE OR TWO STEP INSTRUCTIONS. DEAL WITH STANDARDIZED SITUATIONS WITH OCCASIONAL OR NO VARIABLES IN OR FROM THOSE SITUATIONS ENCOUNTERED ON THE JOB.	COUNTING AND ADDITION AND SUBTRACTION OF TWO-PLACE NUMBERS. DEVELOP FAMILIARITY WITH STANDARD UNITS OF MEASUREMENT, AND WITH BASIC MEASURING EQUIPMENT, SUCH AS CLOCKS, RULERS, AND SCALES.	READ, SPEAK AND PRINT SIMPLE SENTENCES CONTAINING SUBJECT, VERB, AND OBJECT, USING PRESENT AND PAST TENSES.
LEVEL 2	APPLY COMMON SENSE UNDERSTANDING TO CARRY OUT DETAILED BUT UNINVOLVED WRITTEN OR ORAL INSTRUCTIONS. DEAL WITH PROBLEMS INVOLVING A FEW CONCRETE VARIABLES IN OR FROM STANDARDIZED SITUATIONS.	PERFORM THE FOUR BASIC ARITHMETIC OPERATIONS, USING WHOLE NUMBERS, AND COMMON AND DECIMAL FRACTIONS. DEVELOP KNOWLEDGE OF STANDARD UNITS OF MEASURE, AND THEIR INTERRELATIONSHIPS.	READ, WRITE, AND SPEAK COMPOUND AND COMPLEX SENTENCES USING ADJECTIVES AND ADVERBS, AND VARYING WORD ORDER IN PHRASES, CLAUSES AND SENTENCES. DISCERN AND ORGANIZE FACTS AND OPINIONS FOR WRITTEN AND ORAL COMMUNICATION.
LEVEL 3	APPLY COMMON SENSE UNDERSTANDING TO CARRY OUT INSTRUCTIONS FURNISHED IN WRITTEN, ORAL, OR DIAGRAMMATIC FORM. DEAL WITH PROBLEMS INVOLVING SEVERAL CONCRETE VARIABLES IN OR FROM STANDARDIZED SITUATIONS.	COMPUTE DISCOUNT, INTEREST, PERCENTAGE, SURFACE AREAS, VALUES, WEIGHTS, AND MEASURES, USING FOUR BASIC ARITHMETIC OPERATIONS.	SELECTIVE READING OF TEXT BOOKS AND OTHER MATERIAL TO EXTRACT ESSENTIAL THEME OR IDEA. COMPOSE THEMES, REPORTS, AND ESSAYS FOLLOWING RULES OF GRAMMAR, SPELLING, NEATNESS, AND FORMAT.
LEVEL 4	APPLY PRINCIPLES OF RATIONAL SYSTEMS TO SOLVE PRACTICAL PROBLEMS AND DEAL WITH A VARIETY OF CONCRETE VARIABLES IN SITUATIONS WHERE ONLY LIMITED STANDARDIZATION EXISTS. INTERPRET A VARIETY OF INSTRUCTIONS FURNISHED IN WRITTEN, ORAL, DIAGRAMMATIC OR SCHEDULED FORM.	PERFORM ARITHMETIC, ALGEBRAIC AND GEOMETRIC OPERATIONS AS APPLIED TO STANDARD SITUATIONS; PERFORM SHOP MATHEMATIC OPERATIONS IN PRACTICAL APPLICATION TO THE MANUAL ARTS.	SPEAK ON A VARIETY OF SUBJECTS, OR COMPOSE BUSINESS LETTERS, REPORTS, SUMMARIES OR EXPOSITIONS CONFORMING TO RULES OF GRAMMAR, CONTINUITY, DICTION, COORDINATION, LENGTH OF HARMONY AND SEQUENCES OF SENTENCES AND PARAGRAPHS.
LEVEL 5	APPLY PRINCIPLES OF LOGIC OR SCIENTIFIC THINKING TO DEFINE PROBLEMS, COLLECT DATA, ESTABLISH FACTS AND DRAW VALID CONCLUSIONS. INTERPRET AN EXTENSIVE VARIETY OF TECHNICAL INSTRUCTIONS, IN BOOKS, MANUALS, OR MATHEMATICAL OR DIAGRAMMATIC FORM. DEAL WITH SEVERAL ABSTRACT OR CONCRETE VARIABLES.	APPLY KNOWLEDGE OF ESTABLISHED STATISTICAL AND MATHEMATICAL TECHNIQUES IN THE ANALYSIS AND EVALUATION OF DATA.	READ OR WRITE SPEECHES, BOOK AND PLAY REVIEWS, SCIENTIFIC AND TECHNICAL MATERIALS, ABSTRACTS, FINANCIAL REPORTS AND LEGAL DOCUMENTS. BE CONVERSANT IN THE THEORY, PRINCIPLES AND METHODS OF EFFECTIVE AND PERSUASIVE SPEAKING INCLUDING VOICE, DICTION AND PHONETICS, IN DISCUSSION AND DEBATE.
LEVEL 6	APPLY PRINCIPLES OF LOGICAL AND SCIENTIFIC THINKING TO A WIDE RANGE OF INTELLECTUAL AND PRACTICAL PROBLEMS. DEAL WITH NONVERBAL SYMBOLISM (FORMULAS, SCIENTIFIC EQUATIONS, GRAPHS, MUSICAL NOTES, ETC.) IN ITS MOST DIFFICULT PHASES. DEAL WITH A VARIETY OF ABSTRACT AND CONCRETE VARIABLES. COMPREHEND THE MOST ABSTRUSE CLASSES OF CONCEPTS.	APPLY KNOWLEDGE OF ESTABLISHED AND THEORETICAL MATHEMATICAL AND STATISTICAL CONCEPTS IN THE FIELD OF RESEARCH AND DEVELOPMENT.	SAME AS LEVEL V.

MDS&A, data source U.S. DOL

Table 2

WHERE THE NEW REGIONAL JOBS WILL BE

OCCUPATIONAL GROUP	MEAN GED LEVEL FOR:			PERCENT OF EMPLOYERS NEW JOBS BY OCCUPATION FOR:				
	Reasoning	Math	Language	Private Sector	Public Sector			Educational
					Federal	State	Local	
Management and Management-Related	**5**	**4**	**4**	**14%**	**34%**	**26%**	**5%**	**3%**
Management/Admin	5	4	4	10	8	6	2	3
Management Support	5	4	4	4	26	20	3	
Professional Specialty	**5**	**4**	**5**	**16%**	**24%**	**21%**	**12%**	**53%**
Engin,Arch,Surv.	5	5	5	2	8	2	2	
Natural,Comp,Math	6	6	6	2	10	1		1
Social Science	5	3	5		1	1	1	1
Social,Recre,Relig.	5	3	5	1		10	5	
Lawyers,Judicial	6	4	6	1	1	3	3	
Teachers,Lib,Coun.	5	3	5	4	1	2	1	50
Health Diag.&Treat.	5	4	5	5	4	1		1
Writers,Ent.	4	3	4	1				
Technicians	**4**	**4**	**4**	**7%**	**13%**	**10%**	**4%**	**4%**
Health	4	4	4	3	1	4	1	2
Engineering	4	4	4	1	4	3	1	
Other	4	3	4	3	8	4	2	2
Marketing and Sales	**4**	**3**	**4**	**17%**				
Administrative Support and Clerical	**3**	**2**	**3**	**14%**	**20%**	**37%**	**58%**	**35%**
Service Occupations	**3**	**2**	**3**	**19%**	**5%**	**2%**	**10%**	**3%**
Blue Collar and Precision Trade	**3**	**2**	**3**	**17%**	**2%**	**2%**	**7%**	**1%**
Laborers	**2**	**1**	**1**	**3%**	**2%**	**2%**	**4%**	**1%**

MDS&A, totals may exceed 100% due to rounding. Data from U.S.BLS and NOICC.

Table 3

THE FASTEST GROWING JOBS IN THE SOUTHEAST

OCCUPATION...	AVERAGE GED SKILL LEVEL REQUIRED		
	Reasoning	Math	Language
In the Private Sector			
Paralegal personnel	5	2	5
Medical assistants	4	4	4
Physical therapists	5	4	5
Physical and corrective therapy assistants and aides	4	3	4
Data processing equipment repairers	4	3	3
Home health aides	3	2	2
Podiatrists	5	4	5
Computer systems analysts	6	5	5
Medical records technicians	4	3	3
Employment interviewers	5	3	5
Average GED level required............	4.5	3.3	4.1
In the Federal Government			
Computer systems analysts	6	5	5
Accountants and auditors	5	5	5
General paraprofessionals and technicians	5	3	5
Legal assistants and clerks	5	3	5
Physicians and surgeons	6	5	5
Electrical and electronic engineers	5	5	5
Management analysts	5	5	5
Engineering technicians	5	4	4
Employment interviewers	5	3	5
General engineers	5	5	5
Average GED level required............	5.2	4.3	4.9
In State Governments			
Correctional officers	3	2	2
Social workers	5	3	5
Social welfare services workers	5	3	5
General management support personnel	5	4	4
General paraprofessionals and technicians	5	3	5
Electrical and electronic engineers	5	5	5
Employment interviewers	5	3	5
Health technicians	4	4	4
Lawyers	6	4	6
Child care workers	3	2	2
Average GED level required............	4.6	3.3	4.3
In Local Governments			
Police patrol officers	4	2	3
Fire fighters	4	2	3
General protective service workers	3	2	3
General office clerks	4	3	4
Social workers	5	3	5
Gardeners and grounds keepers	2	1	2
Correctional officers	3	2	2
Lawyers	6	4	6
Building cleaning and service workers	3	1	2
Highway maintenance workers	3	1	2
Average GED level required............	3.7	2.1	3.2

MDS&A, based on data from U.S. BLS and NOICC.

Table 4

SOURCES OF QUALIFYING AND UPGRADING TRAINING FOR AMERICAN WORKERS (All Employees)

	Percent With Qualifying Training				**Percent With Upgrading Training**			
			Employer-Based				**Employer-Based**	
OCCUPATIONAL GROUP	**Total**	**From School**	**Formal**	**Informal**	**Total**	**From School**	**Formal**	**Informal**
ALL EMPLOYEES	55	29	10	26	35	12	11	14
General Managers	71	43	12	39	47	18	17	16
Technical Professionals	94	83	14	23	63	25	23	17
Nontechnical Professionals	92	87	6	16	47	47	10	11
Management Support Spec.	77	52	11	38	52	20	20	17
Technicians	85	58	14	32	52	20	18	19
Administrative Office/Clerical	57	33	7	31	32	10	10	15
Sales	43	15	12	28	32	7	13	15
Service	36	13	9	18	25	7	8	12
Transportation	36	2	8	26	18	2	6	9
Machine Operators	37	6	6	26	22	3	4	16
Craft	66	11	16	44	26	7	7	13
Precision Production	61	17	15	38	36	8	13	18
Mechanics and Repairers	68	19	18	39	44	7	22	17
Extractive	56	4	13	48	34	6	13	18
Laborers	18	2	2	13	14	2	2	10

MDS&A, data taken from DOL/ASTD publication *The Learning Enterprise*.

Table 5

MISMATCH BETWEEN WORKPLACE DEMAND FOR INDIVIDUALS WITH POSTSECONDARY EDUCATION AND THE NUMBER OF INDIVIDUALS RECEIVING DEGREES ANNUALLY FROM REGIONAL POSTSECONDARY INSTITUTIONS

JOB CATEGORY	EDUCATIONAL DEGREE NORMALLY REQUIRED (Major Field to 01 level)	AVERAGE ANNUAL OPENINGS REQUIRING COLLEGE DEGREE (New & Replacement Jobs)			AVERAGE NUMBER OF DEGREES CONFERRED ANNUALLY (All levels)			DIFFERENCE
		TOTAL	1-3 Yrs.	4+ Yrs.	TOTAL	1-3 Yrs.	4+ Yrs	
Management and Management Related	Business & Management (0600) Business & Office (0700) Marketing & Distribution (0800) Communications (0900)	166,747	54,131	112,616	71,086	19,145	51,941	-95,661
Professional Specialties:		175,462	14,033	145,395	106,313	8,875	97,438	-69,149
Engineers, Architects, and Surveyors	Architecture & Envir.Dgn.(0400) Engineering (1400)	21,077	5,143	16,019	17,674	3,983	13,691	-3,403
Natural, Computer, and Math Sciences	Communication Tech. (1000) Computer & Info.Sci. (1100) Life Sciences (2600) Mathematics (2700) Physical Sciences (4000)	18,692	6,804	11,888	22,046	2,666	19,380	+3,354
Social Scientist	Psychology (4200) Social Sciences (4500)	2,385	458	1,927	19,159	137	19,022	+16,774
Lawyers	Law (1st Prof.) (220101)	11,692	-	11,692	4,480	-	4,480	-7,212
Teachers, Librarians, Counselors	Education (1300) Vocational Ed. (2000) Foreign Language (1600) Home Economics (1900) Industrial Arts (2100) Letters (2300) Library Sciences (2500)	51,462	9,719	41,743	38,658	2,089	36,569	-12,804
Health Diagnosing and Treatment	First Professional Degrees	70,154	-	70,154	4,296	-	4,296	-65,858
Technician and Technologists		129,225	70,983	58,142	86,968	57,834	29,134	-42,257
Engineering	Engineering & Related	79,769	43,446	36,323	43,484	28,917	14,567	-36,285
Health	Allied Health	15,156	7,556	7,500	12,569	9,235	3,334	-2,587
	Health Sciences	34,300	19,981	14,319	30,915	19,682	11,233	-3,385
ALL JOBS		1,169,270	572,770	596,500	282,002	89,698	192,304	-877,268

MDS&A, estimates based upon data from Southern Regional Education Board, the U. S. Department of Education, the NOICC Crosswalk Center, and the National Planning Association.

Table 6

FOREIGN INVESTMENT AND BUSINESS OPERATIONS WITHIN THE SOUTHEAST REGION

By State and Country

STATE	Total Foreign Investment (In Billions)	Total Foreign Operations (# of Businesses)	United Kingdom	Canada	Germany	Japan	Switzer-land	France	Latin America	Nether-lands	Australia, New Zealand, & South Afr.	All Others
Alabama	**3.5** (7%)	**339** (8%)	95	46	48	43	26	22	13	21	13	12
Florida	**9.5** (20%)	**944** (23%)	200	154	109	93	75	76	118	39	24	56
Georgia	**8.6** (18%)	**951** (23%)	201	180	145	141	88	59	32	46	23	36
Kentucky	**4.0** (9%)	**321** (8%)	87	51	47	35	26	23	12	16	14	10
Mississippi	**2.4** (5%)	**242** (6%)	60	36	27	22	22	19	10	13	4	20
North Carolina	**8.3** (18%)	**552** (13%)	126	60	98	74	61	42	20	27	16	19
South Carolina	**5.7** (12%)	**325** (8%)	72	42	57	35	41	29	10	19	10	10
Tennessee	**5.2** (11%)	**459** (11%)	111	66	65	76	44	34	14	22	16	11
Southeast Region	**$47.2 Billion**	**4133**	**961** (23%)	**644** (16%)	**596** (14%)	**519** (13%)	**383** (9%)	**304** (7%)	**229** (6%)	**203** (5%)	**120** (3%)	**174** (4%)

MDS&A, based on information obtained from the U. S. Department of Commerce, International Trade Administration, data as of 1987.
Note: Percentages shown in parenthesis in the state columns are of total foreign investment and operations in region. The percentages shown in parenthesis under the Country total columns relate to the country's total investment in U.S.

Table 7

GENERAL TYPES OF TRAINING PROVIDED BY AMERICAN EMPLOYERS DURING TWO PERIODS OF TIME, 1985 and 1988

In Rank Order by Percent of Change, High to low

Type of Training	Percent Providing in 1985	Percent Providing in 1988	Change
Computer Literacy/ Basic Computer Skills	48.2	59.2	+11.0%
Management Skills & Development	74.3	81.3	+7.0%
Clerical/Secretarial Skills	52.9	59.7	+6.8%
Disease Prevention/ Health/Wellness	38.9	45.5	+6.6%
Remedial Basic Education	18.0	24.3	+6.3%
Communications Skills	66.8	72.1	+5.3%
Supervisory Skills	73.7	78.9	+5.2%
Personal Growth	51.9	56.0	+4.1%
Technical Skills/ Knowledge Updating	72.7	76.4	+3.7%
Customer Education	35.7	38.3	+2.6%
New Methods/Procedures	56.5	58.6	+2.1%
Employee/Labor Relations	44.9	45.3	+0.4%
Customer Relations/Services	63.6	63.6	NC
Executive Development	56.5	55.8	-0.7%
Sales Skills	54.1	47.8	-6.3%

MDS&A, data taken from Training Magazine's Industry Reports for 1985 & 1988.

Table 8

SPECIFIC TYPES OF TRAINING PROVIDED BY AMERICAN EMPLOYERS

In Rank Order by Percent of Change, High to Low

Training	Percent Provided in 1985	Percent Provided in 1988	Change
Listening skills	41.0	52.4	11.4%
Outplacement & Retirement planning	13.9	24.0	10.1%
Safety	41.9	51.0	9.1%
Public speaking & Presentation skills	36.3	45.3	9.0%
Delegation skills	37.9	46.8	8.9%
Word processing	54.9	63.5	8.6%
Problem-solving	39.6	48.0	8.4%
Finance	20.1	28.4	8.3%
Strategic planning	26.0	34.2	8.2%
Data processing	31.6	39.5	7.9%
Leadership	54.1	62.0	7.9%
Time management	55.7	63.3	7.6%
Team-building	44.2	51.2	7.0%
Writing skills	33.7	41.4	6.7%
Hiring & Selection processes	53.0	59.6	6.6%
Planning	35.7	42.3	6.6%
Foreign language(s)	4.5	10.9	6.4%
Negotiating skills	29.7	35.9	6.2%
Reading skills	13.2	19.3	6.1%
Performance appraisals	60.8	66.2	5.4%
Management information systems	34.1	39.4	5.4%
Stress management	49.9	54.8	4.9%
Computer programming	36.8	40.6	4.8%
Conducting meetings	33.9	38.4	4.5%
Purchasing	20.7	24.9	4.2%
Decision-making	39.4	43.2	3.8%
Interpersonal skills	41.5	45.1	3.6%
Train-the-trainer	49.4	52.6	3.2%
Product knowledge	54.1	56.9	2.8%
Goal-setting	43.5	44.9	1.4%
New employee orientation	79.8	80.7	0.9%
New equipment operation	61.3	60.9	0.4%
Training Specifically Identified As Being Provided in 1985 But Not Specifically Identified in 1988			
Customer relations	47.5		
Beginning sales skills	43.7		
Advanced sales skills	36.9		
Nutrition	15.7		
Research & Development	13.7		
Manufacturing (e.g. production planning, cost estimating)	10.9		
Training Specifically Identified As Being Provided in 1988 But Not Specifically Identified in 1985			
Motivation		48.7	
Personal computer applications		42.8	
Managing change		40.0	
Substance abuse		35.0	
Smoking cessation		34.4	
Quality control		34.1	
Creativity		21.6	
Ethics		19.7	
Other (topics not listed)		**4.9**	

MDS&A, data taken from Training Magazine's Industry Reports for 1985 & 1988.

Table 9

GENERAL TYPES OF TRAINING PROVIDED BY AMERICAN EMPLOYERS FOR TWO PERIODS, 1985 and 1988
By Industry

Types of Training	**Manuf.**	**Trans./Comm. Publ. Util.**	**Trade**	**Fin./Ins. Banking**	**Business Services**	**Health Services**	**Education Services**	**Public Admin.**	**All Industries**
	85 / 88	**85 / 88**	**85 / 88**	**85 / 88**	**85 / 88**	**85 / 88**	**85 / 88**	**85 / 88**	**85 / 88**
Executive Development	49.9/ 53.0 (+3.1)	55.9/ 35.5 (- 20.4)	49.7/ 60.7 (+ 11.0)	56.4/ 59.5 (+ 3.1)	57.1/ 47.1 (- 10.0)	63.1/ 71.1 (+ 8.0)	52.8/ 51.4 (- 1.4)	73.5/ 63.3 (- 10.2)	56.5/ 55.8 (+ .7)
Management Skills & Dev.	71.8/ 78.8 (+ 7.0)	55.6/ 68.3 (+ 12.7)	80.8/ 84.0 (+ 3.2)	75.0/ 87.3 (+ 12.3)	71.4/ 78.0 (+ 6.6)	87.0/ 91.0 (+ 4.0)	54.7/ 62.3 (+ 7.6)	96.8/ 87.6 (- 8.2)	74.3/ 81.3 (+ 7.0)
Supervisory Skills	69.5/ 74.7 (+ 4.9)	62.3/ 59.5 (- 2.8)	65.0/ 66.1 (+ 1.1)	78.3/ 88.5 (+ 10.2)	65.3/ 75.5 (+ 10.2)	80.6/ 86.0 (+ 4.5)	77.9/ 62.1 (- 15.8)	89.7/ 92.5 (+ 2.8)	73.7/ 78.9 (+ 5.2)
Technical Skills & Knld. Update	66.4/ 77.3 (+ 11.9)	67.1/ 64.3 (- 2.8)	68.3/ 67.4 (- .9)	72.9/ 87.9 (+ 15.0)	78.5/ 76.4 (- 3.1)	81.2/ 80.8 (- .4)	63.8/ 53.5 (- 10.3)	86.3/ 80.2 (- 6.1)	72.7/ 76.4 (+ 3.7)
Clerical & Sect. Skills	44.0/ 51.0 (+ 7.0)	54.4/ 38.4 (- 16.0)	41.3/ 43.3 (+ 2.0)	51.8/ 61.4 (+ 9.6)	51.8/ 56.1 (+ 4.3)	57.2/ 71.0 (+ 13.8)	56.8/ 68.2 (+ 11.4)	81.7/ 72.3 (- 9.4)	52.9/ 59.7 (+ 6.8)
Commun. Skills	52.8/ 66.6 (+ 13.8)	58.3/ 62.1 (+ 3.8)	48.2/ 60.2 (+ 12.0)	74.9/ 81.9 (+ 7.0)	69.5/ 69.0 (- .5)	80.5/ 81.0 (+ .5)	63.1/ 58.2 (- 4.9)	84.5/ 78.8 (- 5.7)	66.8/ 72.1 (+ 5.3)
Customer Rel & Svc.	52.0/ 57.6 (+ 5.6)	64.1/ 38.4 (- 25.7)	83.4/ 43.3 (- 40.1)	80.5/ 61.4 (- 19.1)	55.3/ 56.1 (+ .8)	52.8/ 71.0 (+ 18.2)	43.9/ 68.2 (+ 24.3)	54.5/ 72.3 (+ 18.3)	63.6/ 59.7 (- 3.9)
New Methods & Proced.	44.4/ 51.1 (+ 6.7)	41.2/ 29.9 (- 11.3)	53.5/ 54.5 (+ 1.0)	64.3/ 72.2 (+ 7.9)	46.0/ 55.4 (+ 9.4)	73.8/ 68.5 (- 5.3)	42.6/ 50.5 (+ 7.9)	85.5/ 63.5 (- 22.0)	56.5/ 58.6 (+2.1)
Computer Lit. & Basic Skl.	41.7/ 55.5 (+ 13.8)	41.7/ 38.6 (- 3.1)	30.6/ 38.3 (+ 7.7)	51.3/ 67.5 (+ 16.2)	42.8/ 51.6 (+ 8.8)	41.4/ 62.9 (+ 21.5)	65.7/ 63.6 (- 2.1)	74.4/ 68.9 (- 5.5)	48.2/ 59.2 (+ 11.0)
Employee Labor Rel.	42.8/ 53.3 (+ 10.5)	53.7/ 30.6 (- 23.1)	37.9/ 40.7 (+ 2.8)	35.0/ 44.4 (+ 9.4)	38.5/ 28.8 (- 9.7)	49.4/ 54.0 (+ 4.6)	50.8/ 37.7 (- 13.1)	83.4/ 57.8 (- 25.6)	44.9/ 45.3 (+ .4)
Disease Prev. Health Prom. Wellness	34.4/ 38.5 (+ 4.1)	39.9/ 27.3 (- 12.6)	32.7/ 23.4 (- 9.3)	29.5/ 42.4 (+ 12.9)	34.7/ 37.4 (+ 2.7)	81.5/ 74.7 (- 6.8)	31.6/ 50.8 (+ 19.2)	61.7/ 63.4 (+ 1.7)	38.9/ 45.5 (+ 6.6)
Sales Skills	64.7/ 60.2 (- 4.5)	53.0/ 54.6 (+ 1.6)	65.6/ 69.4 (+ 3.8)	73.3/ 82.9 (+ 9.6)	47.5/ 43.6 (- 3.9)	24.3/ 12.8 (- 11.5)	37.6/ 22.3 (+ 15.3)	2.1/ 8.2 (+ 6.1)	54.1/ 47.8 (+ 6.3)
Personal Growth	45.5/ 50.1 (+ 4.6)	50.2/ 34.8 (- 15.4)	36.9/ 49.8 (+ 12.9)	54.5/ 64.3 (+ 9.8)	53.1/ 50.9 (- 2.2)	58.9/ 65.4 (+ 6.5)	45.1/ 55.5 (+ 10.4)	72.8/ 61.5 (- 11.3)	51.9/ 56.0 (+ 4.1)
Customer Education	34.3/ 39.5 (+ 5.2)	46.4/ 38.0 (- 8.4)	37.8/ 58.4 (+ 20.6)	37.5/ 40.3 (+ 2.8)	43.3/ 46.8 (+ 3.5)	46.5/ 35.8 (- 10.7)	24.4/ 25.1 (+ .7)	8.0/ 26.8 (+ 18.8)	35.7/ 38.3 (+ 2.6)
Remedial Basic Ed.	20.1/ 30.2 (+ 10.1)	21.2/ 9.7 (- 11.5)	11.1/ 7.0 (- 4.1)	16.2/ 17.3 (+ 1.1)	14.3/ 25.7 (+ 11.4)	15.8/ 29.2 (+ 13.4)	26.9/ 41.6 (+ 14.7)	23.6/ 21.7 (- 1.9)	18.0/ 24.3 (+ 6.3)

MDS&A, data taken from Training Magazine's Industry Reports for 1985 & 1988. All figures refer to percent of organizations within each industry that offer formal training in each category (e.g., of all manufacturing companies 49.9% provided executive development in 1985, while 53.0% provided it in 1988, an increase of 3.1%).

Table 10

MAJOR OCCUPATIONAL CATEGORIES OF EMPLOYEES WHO RECEIVED EMPLOYER PROVIDED TRAINING FOR TWO PERIODS, 1985 and 1988

In Rank Order by Percent of Change, High to Low

JOB CATEGORY	PERCENT PROVIDED TRAINING IN 1985	PERCENT PROVIDED TRAINING IN 1988	CHANGE
PROFESSIONALS	48.6	60.3	+ 11.7%
ADMINISTRATIVE OFFICE & CLERICAL	50.9	62.5	+ 11.6%
FIRST-LEVEL SUPERVISORS	64.4	72.5	+ 8.1%
MIDDLE MANAGERS	69.9	77.8	+ 7.9%
SALES REPRESENTATIVES	37.1	43.0	+ 5.9%
SENIOR MANAGERS	60.0	56.8	+ 3.2%
PRODUCTION WORKERS	32.4	35.1	+ 2.7%
EXECUTIVES	67.1	64.5	+ 2.6%
CUSTOMER SERVICE	45.7	44.7	-1.0%

MDS&A, data taken from Training Magazine's Industry Reports for 1985 & 1988.

Table 11

TOTAL ENROLLMENT
SOUTHEAST REGIONAL INSTITUTIONS OF HIGHER EDUCATION

LOCATION (STATE)	Total	White	Female	Percent of Total	Minority	Percent of Total
United States	**12,500,798**	**9,914,183**	**6,725,834**	**54%**	**2,242,845**	**18.4%**
S.E. Region	**1,752,575**	**1,371,282**	**948,788**	**54%**	**343,437**	**19.6%**
	(14%)	**(14%)**	**(14%)**		**(15%)**	
Alabama	181,447	137,301	95,232	**52.4**	40,076	**22.6**
Florida	477,210	362,346	259,184	**54.3**	100,176	**21.7**
Georgia	195,123	150,953	102,666	**52.6**	38,842	**20.5**
Kentucky	144,548	132,581	81,063	**56.1**	10,339	**7.2**
Mississippi	101,095	69,232	54,593	**54.2**	30,088	**30.3**
North Carolina	322,966	253,062	177,768	**55.0**	65,098	**20.5**
South Carolina	134,116	103,801	73,509	**54.8**	28,074	**21.3**
Tennessee	197,070	162,006	104,773	**53.2**	30,744	**16.0**

MINORITY BREAKDOWN

LOCATION (STATE)	Black	Hispanic	Asian/Pacif.	Amer. Ind.	Nonresid. Alien
United States	**1,080,899**	**623,591**	**448,222**	**90,133**	**343,770**
S. E. Region	**264,684**	**55,474**	**17,801**	**5,478**	**38,856**
Alabama	37,690	828	1,182	376	4,070
Florida	44,301	47,434	7,219	1,222	14,688
Georgia	34,303	1,806	2,427	306	5,328
Kentucky	8,803	341	872	323	1,628
Mississippi	28,785	631	427	245	1775
North Carolina	57,370	1,957	3,313	2,458	4,806
South Carolina	25,924	965	978	207	2,241
Tennessee	27,508	1,512	1,383	341	4,320

MDS&A, total enrollment includes those in two and four year institutions and is not based on degree fields. Data from SREB and National Center for Education Statistics, U. S. Department of Education, 1986.

Table 12

ENROLLMENT OF BLACK AND HISPANIC STUDENTS IN SOUTHEAST REGIONAL POSTSECONDARY INSTITUTIONS BY DEGREE PROGRAM

LOCATION (STATE)	Total	Percent in Black Sch.	Percent in Two Yr. Prog.	Percent in Undergrad.	Percent in Graduate	Percent in First Prof.
BLACK STUDENTS						
United States	**1,080,899**	**29**	**43**	**9**	**5**	**5**
S. E. Region	**264,684**	**38**	**37**	**18**	**10**	**7**
Alabama	37,690	47	39	22	12	7
Florida	44,301	19	50	10	6	3
Georgia	34,303	43	22	19	11	14
Kentucky	8,803	0	32	7	3	3
Mississippi	28,785	49	41	30	19	5
North Carolina	57,370	37	42	19	10	8
South Carolina	25,924	33	40	21	11	5
Tennessee	27,508	40	33	15	9	13
HISPANIC STUDENTS						
United States	**623,581**		**46**	**6**	**4**	**4**
S. E. Region	**55,474**		**44**	**2**	**1**	**2**
Alabama	828		33	.4	.6	.6
Florida	47,434		58	10	6	10
Georgia	1,806		17	1	1	2
Kentucky	341		20	.2	.4	.4
Mississippi	631		77	.7	.3	.8
North Carolina	1,957		43	.6	.6	.6
South Carolina	965		51	.8	.4	.8
Tennessee	1,512		51	.8	.4	1

MDS&A, based on data fron the Southern Regional Educational Board and the U. S. Department of Education 1986 Enrollment.

Table 13

CHANGE IN NUMBER OF BACHELOR DEGREES CONFERRED BY INSTITUTIONS OF HIGHER EDUCATION 1976/77 TO 1985/86

DISCIPLINE DIVISION/ FIELD OF STUDY	NUMBER CONFERRED 1976-77	NUMBER CONFERRED 1985-86	PERCENT CHANGE
Total	**919,549**	**987,823**	**7%**
Agriculture & natural resources	21,467	16,823	**-22**
Architecture & environ. design	9,222	9,119	**-1**
Area and ethnic studies	3,450	3,060	**-11**
Business and management	150,964	238,160	**58**
Communications	21,698	41,666	**92**
Communication technologies	1,516	1,425	**-6**
Computer & inform. sciences	6,407	41,889	**554**
Education	143,722	87,221	**-39**
Engineering	40,936	76,333	**86**
Engineering technologies	8,347	19,620	**135**
Foreign languages	13,944	10,102	**-28**
Health sciences	57,122	64,535	**13**
Home economics	17,439	15,288	**-12**
Law	559	1,197	**114**
Letters	38,849	35,434	**-9**
Liberal/general studies	16,763	19,248	**15**
Library & archival sciences	781	157	**-80**
Life sciences	53,605	38,524	**-28**
Mathematics	14,196	16,306	**15**
Military sciences	933	256	**-73**
Multi/interdisciplinary study	17,149	15,700	**-8**
Parks & recreation	5,514	4,433	**-20**
Philosophy & religion	8,158	6,239	**-24**
Theology	6,109	5,602	**-8**
Physical sciences	22,497	21,731	**-3**
Psychology	47,373	40,521	**-15**
Protective services	14,530	12,704	**-13**
Public affairs	17,627	13,878	**-21**
Social sciences	116,879	93,703	**-20**
Visual & performing arts	41,793	36,949	**-12**

NOTE: Based on data from the U. S. Department of Education, Center for Education Statistics. During period 21 degree disciplines/fields declined an average of 21.6% and 9 degree disciplines/fields increased an average of 120%; with the disciplines of Computer & information sciences (up 554%), Engineering technologies (up 135%) , and Law (up 114%) increasing the most while the disciplines of Library and archival sciences (down 80%), Military sciences (down 73%), and Education (down 39%) declined the most.

MDS&A

Table 14

DEGREES AWARDED BY SOUTHEAST REGION INSTITUTIONS OF HIGHER EDUCATION BY FIELD OF STUDY AND DEGREE

FIELD OF STUDY	Total Number Degrees	Percent of all Degrees	Bachelor's Degree Number/Percent		Master's Degree Number/Percent		Doctorate Number/Percent	
All Fields	**180,433**		**140,699**		**37,417**		**3,978**	
Business & Managment	43,715	24	36,043	27	7,524	20	148	4
Education	31,894	18	15,963	11	14,719	39	1,212	31
Social Science	12,387	7	11,239	8	962	3	186	5
Engineering	11,454	6	9,290	7	1,926	5	195	6
Health Sciences	9,056	5	7,298	5	1,638	4	120	3
Psychology	6,453	4	5,178	4	1,005	3	270	7
Life Sciences	6,056	3	4,923	4	680	2	453	11
Communications	5,991	3	5,717	4	262	.7	12	.3
Computer/Info Science	5,953	3	5,174	4	770	2	9	.2
Letters	4,614	3	3,900	3	597	2	117	3
Visual & Perf. Arts	4,603	3	3,970	3	598	2	35	.9
Physical Science	4,026	2	3,196	2	548	2	282	7
Public Affairs	3,479	2	1,773	1	1,655	4	51	1
Engineering and Related Technologies	3,334	2	3,250	2	84	.2	0	0
Protective Services	3,249	2	3,024	2	220	.6	5	.1
Mathematics	2,715	2	2,328	2	332	.9	55	1
ALL OTHER FIELDS	21,454	12	18,433	13	3,897	10	828	21

MDS&A, based on data from the Southern Regional Education Board and the U. S. Department of Education 1986

Table 15

DEGREES AND CERTIFICATES AWARDED BY PUBLIC POSTSECONDARY INSTITUTIONS IN THE SOUTHEAST

LOCATION	ASSOCIATE		BACHELOR'S		MASTER'S		DOCTORIAL		FIRST PROF.DEG.	
(STATE)	% Blk.	% Fem.	% Blk.	% Fem.	% Blk.	% Fem.	% Blk.	%Fem.	% Blk.	% Fem.
United States	**446,047**		**987,823**		**288,567**		**33,653**		**77,910**	
	9%	**55%**	**6%**	**51%**	**5%**	**50%**	**4%**	**34%**	**4%**	**33%**
S. E. Region	**57,067**		**103,727**		**28,424**		**2,845**		**10,210**	
	19%	**59%**	**13%**	**52%**	**10%**	**56%**	**7%**	**35%**	**6%**	**29%**
Alabama	4,115		13,747		3,474		264		855	
	22%	**55%**	**15%**	**52%**	**11%**	**52%**	**8%**	**45%**	**6%**	**30%**
Florida	23,911		21,169		4,562		656		1,823	
	8%	**54%**	**8%**	**49%**	**7%**	**50%**	**6%**	**38%**	**2%**	**37%**
Georgia	3,408		13,785		5,155		539		1,946	
	16%	**61%**	**14%**	**52%**	**10%**	**58%**	**8%**	**36%**	**9%**	**31%**
Kentucky	4,145		9,251		2,872		167		1,281	
	24%	**66%**	**4%**	**52%**	**3%**	**61%**	**2%**	**22%**	**2%**	**28%**
Mississippi	3,843		7,508		1,979		235		500	
	28%	**62%**	**23%**	**53%**	**21%**	**54%**	**8%**	**35%**	**7%**	**23%**
N.Carolina	9,419		16,760		4,303		526		1,662	
	18%	**56%**	**15%**	**53%**	**9%**	**56%**	**4%**	**36%**	**7%**	**31%**
S.Carolina	4,373		8,970		2,645		212		661	
	25%	**59%**	**15%**	**53%**	**11%**	**60%**	**3%**	**30%**	**3%**	**22%**
Tennessee	3,853		12,537		3,434		246		1,482	
	13%	**60%**	**10%**	**50%**	**6%**	**57%**	**6%**	**39%**	**10%**	**26%**

MDS&A, based on data from the Southern Regional Education Board and the U. S. Department of Education 1986.

NOTES

1. Report commissioned by the U. S. Department of Labor from the Hudson Institute, issued June 1987.
2. Published in *Occupational Outlook Quarterly*, Fall 1987; and as a Special Bulletin in March, 1988 (Number 2302).
3. Joint initiatives involving DOL have included one with the U. S. Department of Education which resulted in the issuance of the publication, *The Bottom Line: Basic Skills In The Workplace*, with the U. S. Department of Health and Human Services, which resulted in the issuance of the publication, *Count On Me...Youth 2000*, and a current two-year joint research effort with the American Society of Training and Development which is looking at basic workplace skills. This DOL/ASTD initiative has resulted in the issuance of two publications, one titled *Workplace Basics: The Skills Employers Want*, and another titled *The Learning Enterprise*. In addition, a set of "best practices" texts are planned for publication.
4. While a number of reports and publications have been issued by various public and private sector organizations concerned with the effect projected demographic, economic and social trends will have on the workplace and workforce, the following exemplify those supportive of DOL's initiatives, particularly in the Southeast.
    - *Employment Policies: Looking To The Year 2000*, the National Alliance of Business (NAB);
    - *Youth 2000: A Call For Action*, NAB;
    - *The Fourth 'R': Workforce Readiness*, NAB;
    - *Halfway Home And A Long Way To Go*, report of the 1986 Commission on The Future of the South; and
    - *Meeting The Economic Challenge of the 1990's: Workforce Literacy in the South*, report by MDC, Inc. for the Sunbelt Institute.
5. This report, one of the first of its kind in the nation, was developed primarily as a source of information for DOL officials on the impact of demographic, economic, and social trends projected for the Southeast region and each of its eight states. While developed as a resource for internal use, copies of the report have been provided to numerous outside interests.
6. At the request of the Southeast Regional Office of the National Alliance of Business, the DOL/ETA Southeast Regional Office participated in a joint research project which sought to demonstrate how the *Workforce 2000* demographic, economic, and social trends projected for the nation could be localized. This innovative effort incorporated data relating to the impact of various social issues such as teenage pregnancy, out-of-wedlock births, homelessness, substance abuse, poverty, and adult illiteracy; as well as detailed commentary on current community and employer efforts in human resource development and basic skills enhancement activities. While the full report was not published, an executive summary dealing with those aspects of the report concerning adult illiteracy was published with the assistance of IBM.
7. A Regional Leadership Conference was called by the DOL/ETA Atlanta Regional Administrator. Convened in Peachtree City, Georgia, during February, 1988, the conference sought to provide a setting in which top public and private sector leaders from each of the eight Southeast states could review and discuss the *Workforce 2000* demographics and issues, then develop an action plan for the Governor of each southeastern state.
8. The data used to describe each of the six trends, as well as other aspects of this report, come from various sources, including the U. S. Bureau of the Census and the U. S. Bureau of Labor Statistics. The primary source of data used for the regional demographic and employment projections was the *Regional Economic*

Projections Series 87-R-2, "Regional Economic Growth in the United States: Projections for 1987-2000," Volume I, II, and III, published by the National Planning Association (NPA). This information was supplemented by area specific data from various other regional sources including the Southern Regional Education Board and the labor market information and research units of the eight southeastern State Employment Security agencies.

9. The Department of Labor classifies the nation's industries and business activities into ten (10) major groups (see Graphic 10). Those industries which make up the "goods-producing sector" of the economy are agriculture (including forestry and fishing), mining, construction, and manufacturing. Those industries which make up the "service-producing sector" are T.C.P. (transportation, communications, and public utilities), trade, F.I.R.E. (finance, insurance, and real estate), services, and government.
10. Based upon national projections of the U. S. Bureau of Labor Statistics.
11. The skill ratings referred to are those developed and defined by DOL and identified in supplemental volumes for the Dictionary of Occupational Titles for general educational development. The skill levels relate to reasoning, mathematical, and language development that a worker should possess upon entering a given job. The DOL GED levels range from one, the lowest level of complexity, to six, the highest level of complexity and are cumulative.
12. Labor force participation rates for 1987 averaged 78.4% for white males age 20 and over compared to 74.7% for nonwhite males, 55.6% for white females, and 60.0% for nonwhite females (BLS unpublished data).
13. Work experience averages were derived from data obtained from the National Commission for Employment Policy, The Institute for Social Research at the University of Michigan, the U. S. Bureau of Labor Statistics and the U. S. Bureau of the Census. The educational attainment information was derived from data obtained from the BLS and the Southern Regional Education Board.
14. Based upon information and statistical data obtained from the U. S. Department of Health and Human Services, The Adolescent Pregnancy Prevention Clearinghouse, and the Georgia Department of Human Resources.
15. Failure-to-graduate statistics provided by the U. S. Department of Education, with the economic costs calculated based upon information obtained from the Institute for Educational Leadership, BLS, and the reports, *The Forgotten Half* (W. T. Grant Foundation) and *Toward A More Perfect Union* (The Ford Foundation).
16. Based on the findings of the National Assessment of Educational Progress (NAEP) Study conducted by the Educational Testing Service, these individuals have difficulty and/or cannot do such common everyday things as:
    - ° stating in writing an argument made in a newspaper column,
    - ° orally interpreting a lengthy feature story in a newspaper,
    - ° interpreting the distinctions between two types of employee benefits,
    - ° following directions to travel from one location to another using a map,
    - ° using a bus schedule,
    - ° determining correct change using a simple restaurant menu, and/or
    - ° determining the amount of interest charges from a loan ad.
17. Information on adult functional illiteracy, the estimated size of the population and magnitude of the economic costs were derived from various studies, including *Looking To The Year 2000: A View From The Southeast.*
18. This definition comes from Webster's New Collegiate Dictionary. Poverty level income definitions or levels are set by and/or used by the U. S. Departments of Health and Human Services and Labor for grant-in-aid programs. Estimates are based on national statistics and area specific data from Census, BLS, and various state agencies.

19. Final report of The W. T. Grant Foundation Commission on Work, Family and Citizenship, titled *The Forgotten Half: Pathways to Success For America's Youth and Young Families*, issued November, 1988.
20. Projections on homeless derived from information obtained from the Interagency Task Force on Homeless, The National Coalition for Homeless, and The Council of State Governments.
21. The economic cost projections were calculated based on information provided by the Interagency Task Force on Homeless.
22. The information and estimates provided on substance abuse are based upon information obtained from the Georgia Department of Human Resources and The National Clearinghouse for Drug Abuse Information.
23. National statistics obtained from the National Clearinghouse for Drug Abuse Information were used to project regional abuse estimates.
24. Surveys conducted by the American Management Association, the Employment Management Association, the College Placement Council, and the Placement Offices of Northwestern and Michigan State Universities confirm that about one-third of American employers test for drugs.
25. For the purpose of this report, the public sector is defined as including Federal civilian employment in agencies and enterprises; state and local government, excluding education and hospitals; and quasi-public agencies such as area planning commissions, transit authorities, etc. The data presented is based on NPA regional projections as supplemented by unpublished national projections and industry matrix data from the BLS.
26. Based on information contained in the Hudson Institute/U. S. Office of Personnel Management report *Civil Service 2000* , the General Accounting Office report *Managing Human Resources*, and regional projection data from NPA as supplemented by unpublished national projections and matrix data from BLS.
27. This two year research project is designed to look at workplace basic skills that employers want and the level of skill employees bring to the job. The estimates reported and used here come from the BLS study *How Workers Get Their Training.*
28. Projected based on unpublished BLS data on the educational attainment levels of the general civilian population, the current labor force, and non-labor force age 16 and over.
29. Based on the findings of the National Assessment of Educational Progress; the national reading, writing, and math reports of the Educational Testing Service; and the U. S. DOE report *The Condition of Education.*
30. Based on information obtained from the Southern Regional Education Board.
31. National Assessment of Educational Progress data as supplemented by the U. S. DOE National Center for Educational Statistics.
32. The U. S. DOL/ASTD publication *Workplace Basics: Skills Employers Want* lists seven skill areas required by today's jobs. They are: learning to learn, the three R's (reading, writing, computation), communication (listening and oral), creative thinking (problem solving), self-esteem (goal setting-motivation/personal and career development), interpersonal skills (negotiation and teamwork), and leadership (organizational effectiveness).
33. Based on unpublished data from BLS, OPM, and a telephone survey of several state and local government agencies in the Southeast.
34. Based on findings of personnel practices surveys conducted as part of the DOL/NAB *Atlanta 2000* study and information from *How To Prevent Costly Turnover*, an article in the June, 1989 issue of *Business Atlanta.*
35. Unpublished BLS data as supplemented by a survey conducted for the DOL/NAB *Atlanta 2000* study.

36. Based on Federal pay increases from 1982 through 1988 and state/local pay increases as reported in telephone survey of selected state merit systems in the Southeast.
37. According to unpublished BLS/OPM data private sector employees averaged the following increases in compensation: up 6.8% in 1982, 5.9% in 1983, 4.4% in 1984, 4.3% in 1985, 3.2% in 1986, 3.0% in 1987, and 4.4% in 1988. The cumulative increase from 1982 through 1988 was 32.0 percent. The President's pay agent found pay comparability off 18.5% in 1982 (Federal pay increase was 4.0), off 21.5% in 1983 (Federal pay increase was 4.0%), off 18.3% in 1984 (Federal pay increase was 3.5%), off 19.2% in 1985 (no Federal pay increase given), off 23.8% in 1986 (Federal pay increase was 3.0%), off 23.7% in 1987 (Federal pay increase was 2.0%), and off 26.3% in 1988 (Federal pay increase was 4.1%). A review of selected state merit system pay survey findings indicated that state salary structure is 15 to 30% off Federal and private sector pay.
38. *Civil Service 2000*, report of the Hudson Institute commissioned by the U. S. Office of Personnel Management; U. S. General Accounting Office report number GGD-89-19, *Managing Human Resources: Greater OPM Leadership Needed To Address Critical Issues*; *Attracting Quality Graduates To The Federal Government*, a special report of the U. S. Merit Systems Protection Board; and *Leadership For America: Rebuilding The Public Service*, the report of the National Commission on the Public Service.
39. Research findings by the Hudson Institute and the U. S. Office of Personnel Management have found that the average age of the Federal workforce is higher than the average age of either the workforce in general of the general population.
40. Based on data obtained from the U. S. Department of Commerce, International Trade Administration.
41. Based on unpublished data from the U. S. DOL, Employment and Training Administration, relating to requests for non-agricultural alien labor certifications in the Southeast.
42. Bureau of National Affairs periodic survey *Recruitment and Selection Procedures*.
43. Training Magazine's Industry Report, published October, 1988.
44. The "Three Secretaries Conference" was convened in Washington, D.C., in July, 1988 by DOL Secretary Ann McLaughlin, DOC Secretary C. William Verity, and DOE Secretary William J. Bennett. Fifty-eight participants including leaders and experts like Jack Anderson, syndicated columnist; Albert Shanker, President, American Federation of Teachers; Carroll Campbell, Governor, South Carolina; Eugene Dorset, President, Gannett Foundation; William Kolberg, President, National Alliance of Business; Robert Smith, Chair/CEO, General Motors; and Lamar Alexander, President, University of Tennessee, discussed and made recommendations on critical social issues such as adult illiteracy.
45. Based on information from the Southern Regional Education Board.
46. The December issue of the DOL/BLS *Monthly Labor Review* included an article which compared employee benefits in the public and private sectors. The information presented here is based on that study and the findings of various surveys conducted by the American Management Association as reported in the August, 1986, December 1986, February, 1987, and May, 1988 issues of *Personnel*.
47. Based on survey information reported in the February, 1987 issue of the AMA publication *Personnel*.
48. These comments are based on the recommendations published in the U. S. OPM report *Civil Service 2000* and the report of the National Commission on the Public Service, *Rebuilding the Public Service*.

49. Based on information from the U. S. Department of Education, the fund allocation figures for adult education for program year 1988 were:

State	Federal Share	State Share	Total
Alabama	2,142,736	2,266,520	4,409,256 (5.2%)
Florida	4,281,142	45,535,360	49,816,508 (58.7%)
Georgia	2,904,502	1,416,458	4,320,960 (5.1%)
Kentucky	2,150,217	277,187	2,427,404 (2.9%)
Mississippi	1,487,288	155,500	1,642,788 (1.9%)
N. Carolina	3,223,762	10,272,982	13,496,744 (15.9%)
S. Carolina	1,823,605	3,959,805	5,783,410 (6.8%)
Tennessee	2,528,815	497,437	3,026,252 (3.6%)
Totals	20,542,067	64,381,249	84,923,316

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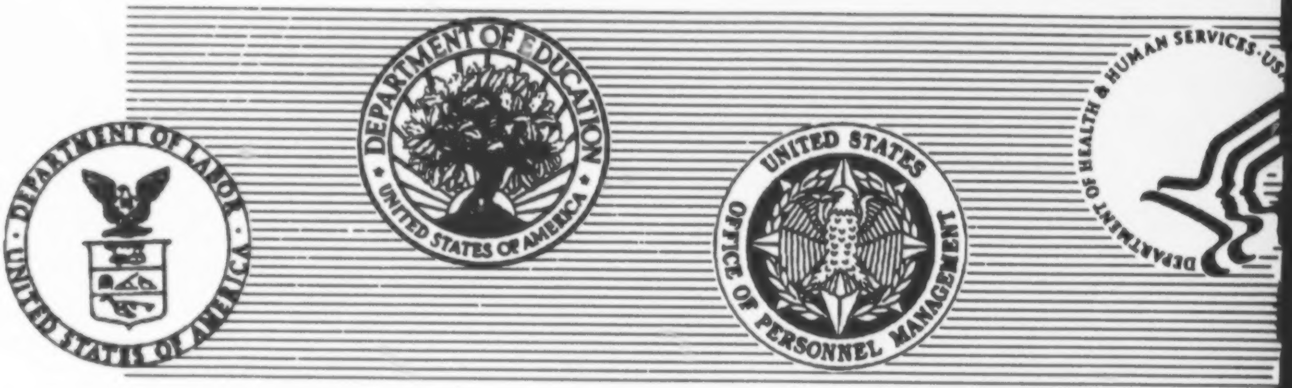
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